



# Welcome to your CDP Climate Change Questionnaire 2019

## C0. Introduction

### C0.1

#### **(C0.1) Give a general description and introduction to your organization.**

Who we are:

Philip Morris International Inc. (PMI) is a leading international tobacco company with a workforce of around 77400 people worldwide as of December 31, 2018.

In 2018, our products were sold in over 180 markets. We operated 44 production facilities globally. Our tobacco was sourced from over 350,000 farmers across 27 countries. With executive headquarters in New-York, US and publicly traded (NYSE: PM); PMI has its Operations Center in Lausanne, Switzerland.

What we do:

PMI manufactures and sells cigarettes, smoke-free products and associated electronic devices and accessories, and other nicotine-containing products in markets outside of the United States of America. Our portfolio comprises both international and local brands and is led by *Marlboro*, the world's best-selling international cigarette. In 2018, PMI net revenues amounted to USD 79.8 billion including excise taxes on products worth USD 50.2 billion. 2018 net revenues less excise tax amounted to 29.6 billion USD. 2018 Operating Income was USD 11.4 billion. PMI's 2018 total shipment volume for cigarette and heated tobacco units was 781.7 billion (740.3 billion cigarettes and 41.4 billion heated tobacco units).\*\*

The description above is a summary and is qualified in its entirety by reference to the full text of PMI's Annual Report on Form 10-K for the year ended 2018 filed with the U.S. Securities and Exchange Commission.

Our vision:

We are building our future on smoke-free products that are a much better consumer choice than continuing to smoke cigarettes. Our vision is that these products ultimately replace cigarettes to the benefit of adult smokers, society, our company and our shareholders.



Sustainability:

For PMI, sustainability means creating long-term value while minimizing the negative externalities associated with our products, operations and value chain. We are committed to address the impact on the communities and the environment around our value chain. While operating in a highly regulated environment, we strive to go beyond mere compliance to achieve a sustainable smoke-free future.

In 2018, we conducted a new sustainability materiality analysis, enabling us to re-prioritize our sustainability focus. Climate change, emissions and energy, as well as biodiversity, deforestation and land use, emerged as tier 1 topics and are prioritized in our sustainability strategy.

The engagement beyond our own operations is key, as this is where the most significant sustainability impacts occur, especially when it comes to climate change and carbon emissions.

1. Our business has a significant, global supply chain organized by five main categories: We have a large agricultural supply chain, ranging from tobacco growers to producers of other agricultural products, such as clove, menthol and guar gum.
2. Another part of the supply chain consists of manufacturers of direct materials used to produce cigarettes and other tobacco products, such as acetate tow (for cigarette filters) and paper (both cigarette paper and for packaging materials).
3. Key to our business are also the manufacturers of machines for our cigarette and heated tobacco products factories, a highly specialized industry.
4. A recently added part of our supply chain consists of the manufacturers of electronic devices for heated tobacco products and e-cigarettes.
5. Finally, we work with thousands of suppliers of goods and services that are not specific to the tobacco business, but essential for any business, such as office equipment etc.

As a responsible business, we want to understand and continuously address potential sustainability issues in our global supply chain. We are working with business partners to proactively identify, manage, and reduce risks, and create shared value.

Remarks for this disclosure:

- In this report, "PMI," "we," "us" and "our" refer to Philip Morris International Inc. and its subsidiaries;
- In this report we reference information reported in the 2019 Proxy Statement dated March 21st 2019;
- Trademarks and service marks in this report are the registered property of, or licensed by, the subsidiaries of Philip Morris International Inc.;
- Reduced-Risk Products - "RRPs" - is the term PMI uses to refer to products that present, are likely to present, or have the potential to present less risk of harm to smokers who switch to these products versus continued smoking. PMI has a range of RRP's in various stages of development, scientific assessment and commercialization



- Materiality: In this report and in related communications, the terms “materiality,” “material” and similar terms, when used in the context of economic, environmental, and social topics, are defined in the referenced sustainability standards, and are not meant to correspond to the concept of materiality under the U.S. securities laws and/or disclosures required by the U.S. Securities and Exchange Commission  
 All data provided refers to calendar year 2018 January 1st to December 31st

## C0.2

**(C0.2) State the start and end date of the year for which you are reporting data.**

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Row 1	January 1, 2018	December 31, 2018	No

## C0.3

**(C0.3) Select the countries/regions for which you will be supplying data.**

- Albania
- Algeria
- Argentina
- Armenia
- Australia
- Bangladesh
- Bosnia and Herzegovina
- Brazil
- Bulgaria
- Canada
- Chile
- China
- China, Hong Kong Special Administrative Region
- China, Macao Special Administrative Region
- Colombia



- Costa Rica
- Croatia
- Czechia
- Denmark
- Dominican Republic
- Ecuador
- Egypt
- El Salvador
- Finland
- France
- Georgia
- Germany
- Greece
- Guatemala
- Hungary
- India
- Indonesia
- Israel
- Italy
- Jamaica
- Japan
- Jordan
- Kazakhstan
- Kuwait
- Lebanon
- Lithuania
- Malaysia
- Mexico
- Morocco
- Netherlands



New Zealand  
Nicaragua  
Nigeria  
Norway  
Pakistan  
Panama  
Paraguay  
Peru  
Philippines  
Poland  
Portugal  
Republic of Korea  
Republic of Moldova  
Réunion  
Romania  
Russian Federation  
Senegal  
Serbia  
Singapore  
Slovakia  
Slovenia  
South Africa  
Spain  
Sweden  
Switzerland  
Taiwan, Greater China  
Thailand  
The former Yugoslav Republic of Macedonia  
Tunisia  
Turkey



- Ukraine
- United Arab Emirates
- United Kingdom of Great Britain and Northern Ireland
- United Republic of Tanzania
- Uruguay
- Venezuela (Bolivarian Republic of)
- Viet Nam

### C0.4

**(C0.4) Select the currency used for all financial information disclosed throughout your response.**

USD

### C0.5

**(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.**

Operational control

### C-AC0.6/C-FB0.6/C-PF0.6

**(C-AC0.6/C-FB0.6/C-PF0.6) Are emissions from agricultural/forestry, processing/manufacturing, distribution activities or emissions from the consumption of your products – whether in your direct operations or in other parts of your value chain – relevant to your current CDP climate change disclosure?**

	Relevance
Agriculture/Forestry	Elsewhere in the value chain only [Agriculture/Forestry/processing/manufacturing/Distribution only]
Processing/Manufacturing	Both direct operations and elsewhere in the value chain [Processing/manufacturing/Distribution only]

Distribution	Both direct operations and elsewhere in the value chain [Processing/manufacturing/Distribution only]
Consumption	Yes [Consumption only]

## C-AC0.6b/C-FB0.6b/C-PF0.6b

**(C-AC0.6b/C-FB0.6b/C-PF0.6b) Why are emissions from agricultural/forestry activities undertaken on your own land not relevant to your current CDP climate change disclosure?**

### Row 1

#### Primary reason

Do not own/manage land

#### Please explain

We don't own the tobacco farms or the land that supply us with tobacco leaf, but the farmers who run them are a crucial part of our economic, environmental, and social footprint. We are working directly with them and our suppliers to promote sustainable farming and climate change mitigation initiatives as part of our Good Agricultural Practices (GAP) program.

## C-AC0.7/C-FB0.7/C-PF0.7

**(C-AC0.7/C-FB0.7/C-PF0.7) Which agricultural commodity(ies) that your organization produces and/or sources are the most significant to your business by revenue? Select up to five.**

#### Agricultural commodity

Tobacco

#### % of revenue dependent on this agricultural commodity

More than 80%



**Produced or sourced**

Sourced

**Please explain**

100% of the heated tobacco units and cigarettes we produce require tobacco

---

**Agricultural commodity**

Timber

**% of revenue dependent on this agricultural commodity**

More than 80%

**Produced or sourced**

Sourced

**Please explain**

100% of the heated tobacco units and cigarettes we produce require timber-based materials

## **C1. Governance**

### **C1.1**

**(C1.1) Is there board-level oversight of climate-related issues within your organization?**

Yes

#### **C1.1a**

**(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.**

Position of individual(s)	Please explain
Board-level committee	PMI's Board of Directors (BoD) and its committees are responsible to foster the long-term success of the company including setting broad corporate policies, strategic direction, and overseeing management, who is responsible for daily operations. In 2018, the BoD mandated the Nominating and Corporate Governance Committee of the Board, composed by 6 BoD members, to oversee PMI's sustainability strategies and performance, including climate change-related issues, and a set of initiatives aiming to eliminate unfavourable impacts of our business on the environment. The Audit Committee of the BoD, composed by 6 BoD members, oversees the assessment and management of the company risks including those related to climate change such as natural disasters, water scarcity and agricultural instability, which may lead to increased pressure on natural resources and conflict with other users, affect our direct operations and/or our supply chain, and thus potentially impacting PMI's ability to operate.

## C1.1b

**(C1.1b) Provide further details on the board's oversight of climate-related issues.**

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	<ul style="list-style-type: none"> <li>Reviewing and guiding strategy</li> <li>Reviewing and guiding major plans of action</li> <li>Reviewing and guiding risk management policies</li> <li>Reviewing and guiding annual budgets</li> <li>Reviewing and guiding business plans</li> <li>Setting performance objectives</li> </ul>	<p>The Board of Directors (BoD) oversees PMI's full range of activities including establishing broad corporate policies setting strategic direction, and overseeing management. The BoD is responsible for the day-to-day operations of the company and takes into account climate-related issues as part of their oversight process. Part of the BoD's oversight is focused on management's efforts to enhance shareholder value responsibly and sustainably.</p> <p>The BoD believes that environmental factors, including those related to Climate Change, social, and governance (ESG) relevant to the company's business, are important to PMI's long-term success. Those factors are part of the responsibility of the Board and considered in the evaluation of the annual performances of the company and its management.</p>



	<p>Monitoring implementation and performance of objectives</p> <p>Overseeing major capital expenditures, acquisitions and divestitures</p> <p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p>	<p>The BoD approves the company's annual budget and receives updates on the company's performance and targets against the budget throughout the year including those related to the achievement of sustainability and climate change targets.</p> <p>The BoD has established various standing Committees to assist with the performance of its responsibilities and is regularly informed on future plans, and significant issues affecting the business, including the climate-related ones. The BoD meets typically 6 times per year with additional meetings held as necessary. The BoD is advised on climate change-related issues by the Nominating and Corporate Governance Committee of the BoD, which oversees the Company's sustainability strategies and performance. The committee met 4 times in 2018. The BoD oversees the management of risks relating to the Company's business. Risk oversight is conducted both by Committees of the BoD as well as by the full BoD. Management has identified and prioritized a number of key enterprise risks and, as part of the risk management process, has established a Corporate Risk Governance Committee ("CRGC") comprising the COO, the CFO, the Vice President and Controller, the Vice President Corporate Audit, and the Vice President and Chief Ethics &amp; Compliance Officer. Management reports on these risks to the appropriate Committee and to the full Board. In 2018, the Company conducted a full-scale reassessment of the strategic enterprise risk management program Ownership of each of the prioritized risks is assigned to a member of senior management, and the oversight of their management is assigned to a particular Board Committee. The Audit Committee of the BoD was assigned to oversee the management of climate change prioritized risk as it could result in natural disasters, water scarcity, agricultural instability, which may impact PMI's ability to operate; the Committee met 8 times in 2018. A member of the senior management team, the Senior Vice President Operations, was tasked with the responsibility to address the climate change risk, including physical climate and water related risks. Management updated the Board on the progress of the reassessment throughout 2018.</p>
--	--	--

**C1.2**

**(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.**

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Other C-Suite Officer, please specify Senior Vice President, Operations	Both assessing and managing climate-related risks and opportunities	Quarterly
Chief Operating Officer (COO)	Both assessing and managing climate-related risks and opportunities	Quarterly
Sustainability committee	Both assessing and managing climate-related risks and opportunities	Half-yearly

## C1.2a

**(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).**

Our Senior Vice President Operations (SVP Operations) is a member of PMI's Senior Management Team (SMT). He reports to PMI's Chief Operating Officer (COO), and is delegated with operational responsibility, including maintaining robust business resiliency, risk assessment processes and strategies to support business continuity. SVP Operations examines and monitors climate change related issues ensuring the integration of risk assessment and management into long-range plan, objectives, budget and performance review processes. In 2018, SVP Operations created the Operations Sustainability Function reporting directly to him and tasked to drive environmental strategies and their full integration into the business, due to the strategic importance that climate-related issues has for our operations. He receives updates on progress towards objectives and their achievement, in monthly meetings with the Operations Management Team (OMT) reporting to him, and during quarterly functional reviews of the Operations Sustainability function and management team.

In 2018, the Company conducted a full-scale reassessment of the strategic enterprise risk management program that was adopted in 2015. Ownership of each of the prioritized risk was assigned to a member of senior management, responsible for the business areas where the risk might have its major impact, and oversight of the management of each risk is assigned to a particular Board Committee. SVP Operations was assigned with responsibility to address the climate change risk because it could result in natural disasters, water scarcity, change in weather patterns, agricultural instability, which may impact PMI's ability to operate. Effectively addressing these risks is critical to the achievement of PMI's strategic objectives and as such should be



considered during the annual Integrated Risk Assessment (IRA) process. Management provided the Board with insights on the reassessment process throughout 2018.

The COO is a member of PMI's SMT and reports to CEO; he is updated on a regular basis on climate change issues by SVP Operations who assesses and manages climate related risks and opportunities.

In 2018, the COO and SVP Operations were the highest level of management of climate-related issues and responsible for reviewing and monitoring PMI's objectives, strategies and action plans related to climate change with the CEO, and reported to the Nominating and Corporate Governance Committee and Audit Committee of the Board of Directors.

The Sustainability Committee (SC) is led by the Chief Sustainability Officer (CSO; although the CSO was formally established in the Company early 2019, the Position was already existing in 2018), who reports to the President External Affairs & General Counsel, a member of PMI's SMT. The CSO coordinates the activities of SC, which is composed of senior leaders from various functions (including Operations, People & Culture, External Affairs, Commercial, Science & Innovation, Global Communications, Finance, Investor Relations, and Corporate Audit). The SC steers the overall sustainability work at PMI, including climate change-related issues, makes go/no-go decisions on programs and other initiatives, reviews progress, identifies topics that require SMT approval. SMT is responsible for leading, overseeing and reviewing the Company's sustainability, including climate-related, activities, strategy, key programs, objectives and budget. SMT receives regular updates by SC. In 2018 the SC met 3 times and members of the Committee updated the BoD; as of 2019 the CSO updates the BoD. The Sustainability Team strives to equip our Company with the relevant know-how and expertise in view of the changing nature of our business. From an operational perspective, the Sustainability Team manages and coordinates our sustainability work, including climate change-related issues, across PMI functions and regions seeking to ensure it is embedded at all levels of the organization. Most of the coordination takes place in the context of sustainability working groups and with local market coordinators. This helps ensure that our global strategies and programs can be implemented at the market level, and that local realities are also reflected in our global efforts.

We have embedded Climate change within our overall business strategy, our Guidebook for Success (Code of Conduct), our Responsible Sourcing Principles (RSP) and Good Agricultural Practices (GAP). We have integrated climate-related issues into normal business activities, it forms part of our annual Long Range Planning process which reviews and sets business direction, objectives and performance appraisal process. In 2018, the strategy was developed/reviewed based on prior year performance, sustainability commitments and objectives, regulatory/external developments, risk/opportunity assessments, stakeholder interest and business changes, through functional management teams up to our Senior Management Team.



## C1.3

**(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?**

Yes

### C1.3a

**(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).**

---

**Who is entitled to benefit from these incentives?**

Chief Executive Officer (CEO)

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction target

**Comment**

Our CEO specifically covers sustainability results including Environment and Health and Safety (EHS) (carbon footprint reductions against targets) in the assessment of our annual company-wide performance that is reviewed by the Compensation and Leadership Development Committee of the Board of Directors. Accordingly, these results are included in our overall performance rating which determines the cash bonuses for the management group and other eligible employees. Executive management covering sustainability, including EHS topics, are specifically appraised each year for performance against targets, including those relating to climate change.

We discuss our executive compensation program in more detail in our proxy statement filed with the U.S. Securities and Exchange Commission.



**Who is entitled to benefit from these incentives?**

Management group

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction project

**Comment**

Our CEO specifically covers sustainability results including EHS results (carbon footprint reductions against targets) in the assessment of our annual company-wide performance that is reviewed by the Compensation and Leadership Development Committee of the Board of Directors. Accordingly, these results are included in our overall performance rating which determines the cash bonuses for the management group and other eligible employees.

Executive management covering sustainability, including EHS topics are specifically appraised each year for performance against targets, including those relating to climate change. The assessment of EHS results (which includes annual performance against our carbon footprint reduction targets) directly influences the annual performance rating of our SVP Operations and certain members of our Management Team including the COO and business unit managers. This covers the annual cash incentive compensation elements for those roles.

---

**Who is entitled to benefit from these incentives?**

Chief Sustainability Officer (CSO)

**Types of incentives**

Monetary reward

**Activity incentivized**

Behavior change related indicator

**Comment**



Our CSO, formally appointed early 2019 (although the CSO was formally established in the Company early 2019, the Position was already existing in 2018), is responsible for driving Sustainability across the organization: all functions and markets. This covers behavioral change towards sustainability, including those relating to climate change, within the company.

---

**Who is entitled to benefit from these incentives?**

Buyers/purchasers

**Types of incentives**

Recognition (non-monetary)

**Activity incentivized**

Environmental criteria included in purchases

**Comment**

Tobacco leaf volume allocation depends, among other factors, on the performance of leaf suppliers that includes Global Agricultural Practices (GAP) program implementation as well as achievement of strategic initiatives targets such as carbon footprint reduction. If leaf suppliers in a region or a market perform well, the buyer responsible for this region/market will not be limited by GAP underperformance in his purchase options, which will support the achievement of his annual objectives and therefore his performance evaluation.

---

**Who is entitled to benefit from these incentives?**

Energy manager

**Types of incentives**

Monetary reward

**Activity incentivized**

Energy reduction target

**Comment**



Managers, team members and others have energy efficiency and carbon footprint reduction targets set out in their annual performance objectives and are assessed against those targets in their annual performance appraisal. Energy efficiency and CO2 emissions reduction targets are set annually for at least three years for all of our manufacturing facilities.

---

**Who is entitled to benefit from these incentives?**

Environment/Sustainability manager

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction target

**Comment**

Managers, team members and others have energy efficiency and carbon footprint reduction targets set out in their annual performance objectives and are assessed against those targets in their annual performance appraisal. Energy efficiency and CO2 emissions reduction targets are set annually for at least three years for all of our manufacturing facilities

---

**Who is entitled to benefit from these incentives?**

Procurement manager

**Types of incentives**

Monetary reward

**Activity incentivized**

Supply chain engagement

**Comment**



Procurement managers have energy carbon footprint engagement targets set out in their annual performance objectives and are assessed against those targets in their annual performance appraisal.

---

**Who is entitled to benefit from these incentives?**

All employees

**Types of incentives**

Monetary reward

**Activity incentivized**

Other, please specify

Climate change mitigation projects

**Comment**

Specific company awards such as the Chairman's Award and Excellence Awards, which are either cash or stock, are available for Energy Managers, EHS Managers, project teams and other employees who are responsible for climate change related initiatives and improvements.

---

**Who is entitled to benefit from these incentives?**

All employees

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction project

**Comment**

Specific company awards such as "Above and Beyond the Call of Duty" (ABCD) awards for best practice initiatives in the areas of climate change, energy and carbon reduction.

---

**Who is entitled to benefit from these incentives?**

All employees

**Types of incentives**

Recognition (non-monetary)

**Activity incentivized**

Behavior change related indicator

**Comment**

Annually many affiliates continue to perform voluntary awareness and promotion campaigns/programs in order to increase employees' active participation in EHS programs and to make carbon footprint reduction part of the company's culture. Awards and recognition for best practices form a core element of such campaigns.

---

**Who is entitled to benefit from these incentives?**

Other, please specify

Operations employees (the largest business unit within PMI, around 40,000 employees)

**Types of incentives**

Recognition (non-monetary)

**Activity incentivized**

Emissions reduction project

**Comment**

Operations employees also have the opportunity to earn awards for best practice initiatives in the areas of climate change, energy and carbon emission reduction. This forms part of our operations "Lead, Lean and Learn" (3L) program which encourages innovation, continuous improvement and employee engagement.



**Who is entitled to benefit from these incentives?**

Other, please specify  
 Employees in our Operations Center

**Types of incentives**

Monetary reward

**Activity incentivized**

Behavior change related indicator

**Comment**

Employees from the Operations Center are encouraged to use public transportation. The annual fee for half-price railway subscription as well as a monthly public transport allowance is paid by the company for those employees who choose to use public transportation rather than commute in their private cars to work, contributing to reduce our carbon emission footprint.

## C2. Risks and opportunities

### C2.1

**(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.**

	From (years)	To (years)	Comment
Short-term	0	1	We evaluate short-term profits and losses as part of our annual financial reporting.
Medium-term	1	5	Our annual Long Range Planning process reviews and sets business direction over a 3 to 5 year horizon. Despite it is called PMI's Long Range Plan, it equates to "medium-term" in CDP terminology.

Long-term	5	15	The physical risks of climate change have the potential to materially impact our business. And thus we have therefore conducted climate risks assessments which have looked out to 2030. We chose that time horizon because it is hard for the climate models to get more granular and to accurately interpret the data.
-----------	---	----	--

## C2.2

**(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.**

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

### C2.2a

**(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.**

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	In 2018, the Company conducted a full-scale reassessment of the strategic enterprise risk management program that had been adopted in 2015. Ownership of each of the prioritized risks is assigned to a member of senior management, and oversight of the management of each risk is assigned to a particular Board Committee. The Audit Committee of the Board of Directors was tasked with overseeing the risk management of climate change as it could result in natural disasters, water scarcity, change in weather patterns, agricultural instability, which may impact PMI's ability to operate. Effectively addressing these risks is critical to the achievement of PMI's strategic objectives and as such should be considered during the annual Integrated Risk Assessment (IRA) process. A member of the senior management team, Senior Vice President Operations was tasked with responsibility for monitoring and addressing the climate change risk.

## C2.2b

### **(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.**

Risk oversight is conducted by both the Committees of the Board with respect to their areas of responsibility as well as by the full Board. To identify and assess climate-related risks, management has identified and prioritized key enterprise risks based on four risk dimensions: the impact a risk could have on the organization if it occurs, the likelihood a risk will occur, the velocity with which a risk would affect the organization if it occurs, and the interconnectivity of a risk with other risks.

In 2018, the Company conducted a full-scale reassessment of the Strategic Enterprise Risks (SER) management program that had been adopted in 2015. As part of the reassessment, management rationalized the list of SER to eliminate overlap and to converge the focus. It revised the descriptions of various risks and identified new ones. It requalified the new list based on the four risk dimensions described above. Management updated the Board on the progress of the reassessment throughout 2018.

As part of the risk management process, the Company has established a Corporate Risk Governance Committee (CRGC described in C1.1b). Ownership of each of the prioritized risks is assigned to a member of senior management, and oversight of the management of each risk is assigned to a specific Board Committee or to the full Board. Management monitors and reports on these risks to the appropriate Committee and to the full Board throughout the year. The full Board oversees the management of risks relating to the Company's business plan and litigation, and receives reports on risk management by each Committee.

PMI Senior Management Team conducts a reassessment of SER on a yearly basis. The impacts of climate change have been determined as part of SER during these assessments as it could result in natural disasters, water scarcity, change in weather patterns, agricultural instability which may impact PMI's ability to operate. The identified SER are then considered during the annual Integrated Risk Assessment (IRA) process if they are deemed to have a substantive impact (e.g.: financial or strategic impact) on the business. PMI evaluates a "substantive impact" based on a combination of factors that may affect PMI's efforts to lead a transformation in the tobacco industry to create a smoke-free future and ultimately replace cigarettes with smoke-free products to the benefit of adults (SDG3) who would otherwise continue to smoke, society, the company and its shareholders.

In 2020+ risk forecasting terms, in relation to both our direct operations and our tobacco supply chain, we assumed as substantive risks those with a potential impact in excess of US\$5M or a raw material impact in excess of 1000 metric tons of tobacco leaves.



As part of the IRA process (at the assessment phase) we have embedded the Climate Change Risk Assessment to evaluate and understand the impact of climate change on PMI businesses. When assessing risks related to Climate Change we consider long term horizons (2030 and 2040 scenarios) and impact drivers including but not limited to events that may:

- influence or impact our operations (e.g.: raw material sourcing, factories, finish goods distribution);
- affect a large number of areas (large meaning 20,000 km<sup>2</sup>) where we source raw materials, impacting the continuity of supply for years, and consequently driving related cost up;
- trigger a competition in resources demand, geopolitical change, water scarcity and human migration impacting the availability of raw materials.

In 2018, as part of IRA process, we performed climate change risk/opportunity assessment following the Taskforce on Climate-Related Financial Disclosures (TCFD) recommendations. This allowed the evaluation of transition risks in addition to the physical ones considering impact drivers such as cost, asset efficiency and reputation. Throughout this process, we mapped 149 Climate Change Risk and Opportunities (CCROs) across Materiality and Certainty then divided into PMI risks' categories: Proactive, Reactive, Non-material, Watch and Potential quick wins to be integrated to the business. After further analysis, it was decided to place more emphasis on the Proactive CCROs, as they have the highest certainty and materiality level; therefore, should be prioritized. Results will be discussed in C2.2c.

As part of our IRA process, we have put in place an extensive risk control program by which to assess the physical risks of climate change. Locations with values exceeding \$30M range are surveyed by engineers from our property insurer, who provide recommendations to us on the magnitude of environmental risks and the cost of management. Recommendations for risk management are given if the expected reduction in the financial impact of the risk exceeds the cost to comply by a factor of 10 or more. Internally, we focus on recommendations above the \$50M range as management of identified risks can involve substantial capital investment and disruption to operations.

## C2.2c

**(C2.2c) Which of the following risk types are considered in your organization's climate-related risk assessments?**

Relevance & inclusion	Please explain

Current regulation	Relevant, always included	<p>We are subject to international, national and local environmental and climate-related laws and regulations in the countries where we operate; regulations which are considered in our climate-related risk/opportunity assessment process.</p> <p>In 2018 we have evaluated climate change risks following TCFD recommendations; this allowed the identification of transition risks for PMI related to an increase in carbon pricing affecting operations manufacturing and logistics, and regulation on energy efficiency requirements affecting our factories processes in the short term.</p> <p>Examples of these risks are:</p> <ul style="list-style-type: none"> <li>- PMI sites being included in an expanded EU emissions trading scheme, which would result in an increase in PMI's spend on carbon price. This risk also extends to the expansion of carbon pricing mechanism across all of the markets in which PMI operates;</li> <li>- Increase of carbon prices within the EU Trading Scheme which would have a low impact in our operations if it materializes.</li> </ul>
Emerging regulation	Relevant, always included	<p>Our operations throughout the globe are subject to various climate-related regulations, which we consider in our climate-related risk/opportunity assessment process. There is a clear international trend towards proliferating and stricter climate-related regulations which could increase our operational costs.</p> <p>In 2018, an evaluation of climate change risks aligned on TCFD recommendations allowed the identification of mid and long term transition risks for PMI business related to technology.</p> <p>In this category, PMI mostly incurs risks related to an increase in carbon pricing affecting operations manufacturing and logistics, and regulation on energy efficiency requirements affecting our factories or mechanized farming processes in the mid and long term.</p> <p>It has been considered:</p> <ul style="list-style-type: none"> <li>i) EU Emission Trading Scheme (ETS): risks linked to widening the EU ETS carbon trading market to include EU accession countries where PMI has facilities.</li> <li>ii) Energy taxes; regulation on Energy Efficiency; Infrastructure/Buildings Directive; promoting energy reduction at source (like in our EU factories); regulations in emerging market, exposing our operations to requirements for increased CAPEX expenditure taking in consideration the potential for combined heat and power; renewable energy and buildings upgrade;</li> </ul>

		<p>iii) Regulations on energy efficiency in the heavy machinery and heavy-duty transport sector are expected to tighten, and the speed of this change in regulation will be heavily depending on the rate of low carbon transition. Mechanical equipment used on farms is currently both energy intensive and heavily reliant on fossil fuels as an energy source. In particular these regulations could result in an increase in the speed of the replacement cycle of machinery and equipment by the farmers resulting in higher annual expenditure on replacement to keep pace with efficiency standards. This in turn would cause an associated indirect increase in procurement costs as the price for tobacco will respond to upward pressure on the cost of production.</p>
Technology	Relevant, always included	<p>In 2018, an evaluation of climate change risks aligned on TCFD recommendations allowed the identification of mid and long term transition risks for PMI business related to technology.</p> <p>The risks identified are related to technology improvements resulting in existing equipment becoming either non-compliant with energy regulations and/or too expensive to run due to the higher costs of fossil-fuel based carburant. Existing equipment would need to be replaced with associated costs of adopting new technologies. PMI's risks in this sector relate to development of new drivetrain technologies, new farming and curing techniques and equipment, new technologies in retail and new product design. All these risks exist and PMI needs to ensure it does not invest in obsolete technology and remains up to date with technological development, which can be costly.</p> <p>We continuously assess risks related to technological improvements that support the transition to a lower-carbon, energy-efficient economic system. An example of this risk is our new electronics manufacturing suppliers. Electronics suppliers are relatively new partners to PMI and are often in geographies where our procurement of direct materials was limited (mainly China and Southeast Asia). We assessed through LCAs the risk around carbon footprint increase due to new electronics supplier and included an electronic supplier in our CDP supply chain program to gather primary data in 2018.</p>
Legal	Relevant, always included	<p>In 2018, an evaluation of climate change risks aligned with TCFD recommendations allowed the identification of mid and long term transition risks for PMI business related to legal.</p> <p>These are the risks related to changes in climate policy.</p> <p>PMI is mostly exposed to additional costs as a consequence of i) increased procurement costs linked to higher raw materials and cost of production, ii) an increase in carbon pricing affecting logistics and operations, iii) new regulation on energy efficiency requirements affecting mechanized farming processes, and iv) regulation on fuel type and use affecting tobacco curing activities.</p> <p>Furthermore, regarding upcoming regulations, the additional burden of non-complying in the future to those new regulations</p>

		<p>could lead to financial penalties, therefore, additional financial losses.</p> <p>We are subject to international, national and local environmental laws and regulations in the countries we operate. We have specific programs across our business units designed to meet applicable environmental compliance requirements to reduce our carbon footprint, wastage, water and energy consumptions.</p> <p>Our subsidiaries expect to continue and/or increase investments in order to drive improved performance and maintain compliance with environmental laws and regulations. We assess and report the compliance status of all our legal entities on a regular basis. Based on the management and controls we have in place and our review of climate change risks (both physical and regulatory), environmental expenditures have not had, and are not expected to have, a material adverse effect on our consolidated results of operations, capital expenditures, financial position, earnings or competitive position.</p>
Market	Relevant, always included	<p>In 2018, an evaluation of climate change risks aligned with TCFD recommendations allowed the identification of transition risks for PMI business related to market changes, such as shifts in supply and demand for certain commodities, products and services. For PMI this includes risks of increasing costs of sourcing commodities (including materials such as water and diesel) and increasing costs for suppliers, resulting in higher procurement costs. It also includes increasing competition for agricultural land, leading to less or more expensive land available for tobacco growing. Other market risks are related to PMI's investors and financial performance, and include the inclusion of climate risk metrics by credit rating agencies, affecting PMI's score, and a general trend of investors moving away from carbon-intensive sectors. Finally, downstream market risks are associated with shifting consumer demands for lower-carbon products.</p> <p>For example, diesel is widely used in many farming practices. PMI's LEAF supply chain and its purchases of tobacco leaf are influenced by the cost of production for farmers. Energy is a significant cost in farming practice in relation to the mechanical equipment used. If diesel prices increase, the overall cost of producing raw tobacco at directly contracted farms, as well as the cost of sourcing tobacco from third-party leaf suppliers, will increase as a result. This in turn would cause an associated indirect increase in procurement costs as the price of tobacco will respond to upward pressure on the cost of production. A key factor in diesel prices is global oil prices, which are expected to have different developments depending on the transition pathway taken at a global level. Under transition pathways aligned to 2 degrees scenario or below, the oil demand will be lower than under scenarios associate with greater temperature increases. As such the expected increase in oil prices and indirectly tobacco prices paid by PMI would be lower in a 2 degree scenario.</p>
Reputation	Relevant, always included	<p>Stakeholder interest and expectations in climate change adaptation is increasing as the effects of climate change become more apparent. Therefore climate-related reputational risk is included into PMI's risk assessments due to the potential risk it could have on the long term success of the company.</p>



		<p>In 2018, an evaluation of climate change risks aligned with TCFD recommendations allowed the identification of transition risks related to reputation for PMI business. Reputational risks identified are related to potential changing stakeholders and particularly customer or community perceptions of an organization’s contribution to or detractor from the transition to a lower-carbon economy. They are related to numerous factors including financial performance, investor focus, enhanced reporting requests from stakeholders, increased workforce concern for sustainability and difficulty in raising capital in light of exposure to the carbon-intensive agriculture sector.</p> <p>For example, PMI assessed the risk of enhanced reporting requests from stakeholders and addressed it. PMI strives to actively manage its reputation through corporate sustainability and climate change strategy, programs and transparent communications including our website, our sustainability report, CDP disclosure, DJSI disclosure, new products LCA (e.g. our RRP) and investments in packaging developments.</p> <p>With regard to increased demand for proof of sustainability claims, such as LCA data and environmental product labels we are also looking at initiatives – including strengthening our product LCA – that can help us build closer cooperation within our value chain to help our stakeholders understand environmental impacts of different packaging alternatives. We undertook LCA projects, including revisiting elements of our carbon footprint assessment as a cost of approximately \$100k in 2017 that resulted in a more accurate baseline and model in 2018. Due to the ramping up of our Reduced Risk Products (RRPs), we develop LCAs around RRP to understand the impacts on our carbon footprint. In addition, our robust environmental management systems and science based climate-related targets help prepare us for this. An example is deforestation risk in specialty papers for cigarette production which has a very limited offer of certified materials or the lack of mature market for certified firewood.</p>
Acute physical	Relevant, always included	<p>Extreme weather events due to climate change have the potential to significantly impact our operations, buildings and suppliers, therefore having a substantive impact on our supply chain and on our business continuity plan. Flooding or typhoons can damage our buildings and goods, as well as the crops of our farmers and our logistics networks. In 2015, PMI performed a comprehensive Climate Change Risk Assessment for corporate and asset level physical risks and opportunities up to 2025-2030. The process included key assets such as factories/warehouses, supplier’s processing facilities/warehouses, as well as ports, and tobacco growing regions.</p> <p>Some of the risks identified are flooding and cyclones in the Philippines, Russia, Hungary, Italy, and Japan that could cause damage in our manufacturing and warehouse sites estimated in the range of \$10-25M for each location according to</p>

		<p>our insurer estimation.</p> <p>This information is reviewed regularly with top management; it enables risk/opportunity identification and management at the company and asset level, and includes regulatory climate change aspects and geopolitical risk. Our substantial tobacco leaf inventories can help mitigate short term impacts. In addition, we regularly review potential new tobacco leaf and clove growing areas and assess if climate change elements could favor yield. We are also actively looking for drought tolerant seed varieties.</p>
Chronic physical	Relevant, always included	<p>Longer term weather shifts due to climate change have the potential to significantly impact our operations, buildings and suppliers.</p> <p>For instance, rising sea levels due to climate change may impact some of our facilities in the Netherlands, therefore incurring on investments to prevent business disruption due to flooding. The same risk in Asia, in tobacco growing areas near coasts, can cause a reduction of allocated land to tobacco production and it may lead to search for new lands, or a land optimization process. These changes are likely to lead to additional costs within our supply chain, create business disruption, personnel relocation and/or enterprise restructuring, and potential reputational risks (generated by socio-economic disruption in the areas where PMI would disinvest.)</p> <p>Similar issues would occur with accelerated land degradation in Africa due to droughts or accelerated desertification of areas where deforestation is taking place. This is one of the core problems that PMI is addressing through its Good Agricultural Practice program. (see section C2.3a for more details).</p> <p>In 2015, PMI performed a comprehensive Climate Change Risk Assessment (CCRA) for corporate and asset level physical risks and opportunities up to 2025-2030, and re-assessed in 2018. The process included key assets such as factories/warehouses, supplier's processing facilities/warehouses, as well as ports, and tobacco growing regions. This information is reviewed regularly with top management, it enables risk/opportunity identification and management at the company and asset level, and includes regulatory climate change aspects and geopolitical risk.</p>
Upstream	Relevant, always included	<p>When we conduct our risk assessments we look broadly and thoroughly at all aspects of our value chain (see section 12 for details of our various programs). Using this approach, we have identified a number of risks in our supply chain of raw materials and are actively working to mitigate them through proactive and collaborative management. Specific to our tobacco supply chain risks, the increasing costs of crop input (including materials such as water, diesel, and fertilizers) therefore increasing costs for suppliers would result in higher procurement costs. These risks have been detailed in</p>



		<p>previous sections (legislation, upcoming legislation and market)</p> <p>Acute and chronic risks result in an increasing competition for agricultural land, leading to less land available or more expensive land to acquire for tobacco growing.</p> <p>In the comprehensive Climate Change Risk Assessment (CCRA) performed in 2015, for corporate and asset level physical risks and opportunities up to 2025-2030, the process included key assets such as upstream factories/warehouses, supplier's processing facilities/warehouses, as well as ports, and tobacco growing regions. This information is reviewed regularly with senior management to identify and manage risk at the company and asset level; it includes regulatory climate change aspects and geopolitical risk.</p> <p>We source agricultural commodities, such as tobacco leaf and clove whose yield and quality are strongly influenced by changes in temperature, precipitation and cyclones.</p>
Downstream	Relevant, always included	<p>When we conduct our risk assessments we look broadly and thoroughly at all aspects of our value chain (see section 12 for details of our various programs). Using this approach, we have identified a number of risks in our supply chain of raw materials and are actively working to mitigate them through proactive and collaborative management.</p> <p>Longer term weather shifts due to climate change (chronic and acute risks) have the potential to significantly impact global logistics services and distribution operators.</p> <p>In 2015, PMI performed a comprehensive Climate Change Risk Assessment (CCRA) for corporate and asset level physical risks and opportunities up to 2025-2030. Examples of these risks are physical risks affecting downstream supplier assets, ports, sea transportation routes, warehouses, or distribution centers.</p> <p>Top management regularly reviews this information, assesses risks to properly understand the potential impact on PMI business and identify management measures, developing business continuity plans, aligning supply chain and demand planning activities for both combustible products and RRP's.</p>

## C2.2d

### (C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

Operational and strategic risks, such as safety, leaf supply, climate change, electronic waste, or labor conditions, are well covered by our risk teams and management processes through which, increasingly, more complex sustainability and human rights risks and opportunities are being embraced at PMI.



In 2018, PMI conducted a full-scale reassessment of the strategic enterprise risk management program adopted in 2015. Ownership of each of the prioritized risk was assigned to a member of senior management and oversight of the management of each risk was assigned to a particular Board Committee. SVP Operations has been tasked with responsibility for addressing the climate change risk as it could result in natural disasters, water scarcity, agricultural instability, which may impact PMI's ability to operate.

Also in 2018, we evaluated climate change risks and opportunities following TCFD recommendations. Different groups of risks and opportunities were considered, including physical risks (acute and chronic) and transition risks (markets, policy and legal). The results of the approximately 150 climate change related risks and opportunities (CCROs) mapped and analyzed will help us to prioritize them for further action as of 2019.

An effective environmental management across our operations and value chain goes beyond compliance with applicable regulations. We follow a two-pronged approach: 1) minimize our environmental impact through reduction of our carbon footprint, waste generation and water use, conserving biodiversity and combating deforestation; and, 2) understand and adapt to potential future business impacts of major environmental trends, such as the impact of climate change on tobacco growing.

The main elements factored-in and prioritized to manage and mitigate climate change risks and to manage and address opportunities are:

- Regularly conducting a Climate Change Risk Assessment to ensure proper understanding of the impact on PMI business (i.e. leaf growing areas, manufacturing sites, distribution centers).
- Strengthening Sustainability efforts to minimize PMI's impact on climate change via numerous strategic initiatives to reduce our carbon footprint and manage sustainably forest resources.
- Managing strategic and operational risks and opportunities, including transition and physical climate-related issues, through the use of different instruments in place, for instance, our Energy Management Program (EMP), business continuity management plans, and our Good Agricultural Practice (GAP) program.
- Exploring opportunities to spread sourcing of materials geographically and robust business continuity programs to ensure continued supply of materials and production.

Especially for managing identified chronic physical risks (and opportunities) that could potentially impact our assets, we have an extensive risk control program based on the concept of Highly Protected Risk (HPR). Locations with values exceeding \$30M are surveyed and those locations exposed to natural catastrophes (e.g. floods) are supported through risk improvement recommendations on physical mitigation solutions or implementation/reinforcement of management (administrative) controls such as Flood Emergency Response plans. An insurer engineer makes recommendations for risk mitigation if the expected risk mitigation potential exceeds the cost by at least a factor of 10. Internally, we mainly focus on



recommendations with values above \$50M range due to the thorough process of assessment followed. Such a process includes: 1) the insurer engineer conducts a site survey; 2) a report is issued to Risk Management; 3) Risk Management reviews the recommendations and transmits the information to Operations (site top management); 4) the site evaluates technical requirements, costs, budgets and creates an action plan; 5) the action plan is provided to Risk Management; 6) Risk Management follows up with Operations and shares the plan with insurers; and, 7) the process repeats. For this example, the outcomes of our management approach in 2018 were less than a dozen natural catastrophe recommendations exceeding a \$10M loss expectancy, being the threshold to impact the HPR rating.

Regarding transition risks, one of the climate-related issues we face is the potential price increase of GHG emissions given that our operations throughout the globe are subject to various climate-related regulations (i.e. EU ETS). To manage climate-related risks and opportunities like this, we count on our Energy Management Program (EMP), which consists of energy consumption monitoring and investments in energy conservation and energy efficiency improvement initiatives. Our EMP serves as basis for potential carbon tax exemptions and “cost to comply” reductions with the EU ETS. One of the outcomes of our management approach for this scenario was that, from 2014-2018, we were able to delist sites from EU ETS as they fell below the total combustion capacity threshold.

## C2.3

**(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?**

Yes

### C2.3a

**(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.**

---

**Identifier**

Risk 1

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type**

Transition risk

**Primary climate-related risk driver**

Policy and legal: Increased pricing of GHG emissions

**Type of financial impact**

Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

**Company- specific description**

Our operations throughout the globe are subject to various climate-related regulations. There is a clear international trend towards increasing and stricter climate-related regulations which could increase our operational costs.

These include, but are not limited to:

- (i) CO2 related trading schemes such as the EU Emission Trading Scheme (EU ETS). As of December 31, 2018 PMI owned and operated a total of 2 factories in Netherlands and Italy covered by the EU ETS, with total verified emissions of over 40,000 metric tons of CO2 in 2018. PMI has other factories in the EU and EU accession countries which could also become subject to EU ETS. Although the cost of EU ETS carbon credits have been lower in the past several years due to a large surplus of allowances, the cost of allowances is expected to increase due to stricter regulations and more significant long-term reforms to reduce oversupply. According to the European Commission manufacturing industry received 80% of its allowances for free in 2013. This proportion will decrease gradually year-on-year, down to 30% in 2020. Thus increasing our operating costs of purchasing allowances in the future. In addition to EU ETS, other countries and regions are considering and, in some cases, developing similar programs, compatible with EU ETS, in an effort to form a global carbon market. Tighter regulations in this area could indirectly influence our supply chain with regard to energy supply, and increase in electricity prices. As an example, our sites in South Africa and Canada could be subject to future cap and trade schemes. Whereas the former is still under discussion, the later seems to be set at \$10 per ton in 2018 and rise by \$10 a year to reach \$50 per ton in 2022 according to the government of Canada.
- (ii) Electricity, fuel and CO2-related levies or taxes such as the climate change levy in the UK and the CO2 tax in Switzerland.
- (iii) General environmental regulations, including facility design, emissions limits and permitting. An example is the EU Energy Efficiency Directive (EU EED) which impact the design of new facilities.
- (iv) Emissions reporting obligations. In various countries around the world we are subject to electricity and fuel related reporting obligations such as the National GHG and Energy Reporting Requirements in Australia and new tax code related to regulations in Ukraine and Germany.

**Time horizon**



Current

**Likelihood**

Likely

**Magnitude of impact**

Low

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

2,000,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

Although the cost of EU ETS carbon credits have been lower in the past several years due to a large surplus of allowances, the cost of allowances is expected to increase due to stricter regulations and more significant long-term reforms to reduce oversupply. According to the European Commission the manufacturing industry received 80% of its allowances for free in 2013. This proportion will decrease gradually year-on-year, down to 30% in 2020, thus increasing our operating costs of purchasing allowances in the future.

We estimate the potential financial impact to be around \$2M based on relevance of EU ETS for our operations: 2 factories in EU ETS scheme in 2018 and annual cost of emissions allowances expectation to be up to \$50/tCO<sub>2</sub> short/medium term. We will likely onboard new sites into EU ETS during 2019 due to the higher RRP production requirements. For Canada, in case the system is put in place as announced and reaches \$50/ton in 2022, annual cost \$100k.

**Management method**



We manage these risks through our Energy Management Program (EMP), which consists of energy consumption monitoring and investments in energy conservation and energy efficiency improvement initiatives. We have an energy monitoring and targeting system in place, with an annual cost of \$200k. Wider best practice sharing and individual energy/GHG reduction projects are part of EMP, and they involve specific investments of around \$10M/year. Our EMP enables us to analyze consumptions and serve as basis for potential carbon tax exemptions (e.g. our Swiss affiliate exempted due to its reduction results) and “cost to comply” reductions with the EU ETS. Design standards include low GHG building practices, e.g. for materials and efficient lighting. Drivers like EU ETS and EU EED led us to consider process changes (e.g. replacement of outdated combustion equipment to more efficient equipment can potentially reduce our energy load to below the 20MW regulatory threshold). From 2014-2018 we were able to delist sites from EU ETS as they fell below the total combustion capacity threshold. Following our energy and CO2 reduction targets means that our Russia factory will already meet or exceed new state regulations such as the “energy conservation and improving energy efficiency in the period up to 2020” law.

Our annual cost of management is the sum of investments in energy conservation and efficiency initiatives (approx. \$10M) and the energy monitoring system operating costs (\$200k).

**Cost of management**

10,200,000

**Comment**

---

**Identifier**

Risk 2

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type**

Physical risk

**Primary climate-related risk driver**

Chronic: Changes in precipitation patterns and extreme variability in weather patterns

**Type of financial impact**

Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)

**Company- specific description**

We purchase tobacco in 27 countries, and around 90% is coming from more than 350,000 farmers contracted either by our direct operations or by third-party leaf suppliers. In 2018, we contracted farmers directly in Argentina, Brazil, Colombia, Ecuador, Italy, Pakistan, the Philippines and Poland.

Physical climate change risks could affect our own operations and those of our suppliers globally. For instance:

(i) Changes in precipitation patterns and extreme variability in weather patterns could affect the yield, quality and availability of our important crops, such as tobacco and cloves, changing our buying patterns and increasing operational costs. Increased drought/flooding could disturb the tobacco life cycle stages. In some Asian countries, in tobacco growing areas near coasts, flood can cause a reduction of allocated land, and if associated with an increase of food crops demand in this area may lead to land competition which can result in additional costs within our supply chain and create business disruption. Similar issues would occur with accelerated land degradation in Africa due to droughts or accelerated desertification of areas where deforestation is taking place. Extreme rainfall may require pumping of excess water; similarly, extreme droughts could require long-term irrigation, both of which increase energy consumption, and the tobacco production cost. Clove yields are complex and weather sensitive in Indonesia. It takes at least 5-7 and 20-40 years for clove trees to, respectively, become productive and reach peak production; with harvests varying by up to 60% over a 4 year cycle. Changes in precipitation patterns could also affect the transportation of our raw materials and goods in our supply chain and interrupt the operations of ports. Extreme rainfall could cause damage to buildings and our goods which would increase our management costs and insurance fees.

(ii) Rising mean temperatures could also impact the quality and yield of the crops we use. While a slight increase in average temperature can lengthen the tobacco growing season in some regions and therefore increase yield, it can also adversely impact the yield and quality of the crop in drought-prone areas like in Philippines for example and increase the need for crop irrigation.

**Time horizon**

Medium-term

**Likelihood**

About as likely as not

**Magnitude of impact**

Medium-low

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

**Potential financial impact figure – minimum (currency)**

3,000,000

**Potential financial impact figure – maximum (currency)**

4,000,000

**Explanation of financial impact figure**

The potential financial impact figures are based on a long term assessment of costs from physical climate change risks related to water issues. We have considered one location and we estimated the relative magnitude at around \$3-4M in the long-term (>6 years) for the Philippines' growers due to supply chain disruptions. This is based on our 2015 company assessment of comprehensive climate change risk (CCRA), in which we assessed sites that are in high cyclone and flood severity zones and estimated the cost of disruption from crop losses, quality impacts and supply chain manufacturing restrictions. Damage to raw materials, finished goods, and buildings could escalate in case that they would happen simultaneously, in the same year, in several operations geographies. In the extreme case where simultaneous events would cause crop failures or tobacco shortages, damage buildings and warehouses, the potential implications could reach around \$100M but that is considered very unlikely.

**Management method**

PMI's operations and supply chain are globally spread mitigating the effects of severe catastrophic climatic disruption, and business continuity management plans are designed to mitigate the consequence of supply chain interruption and disruption. We have a thorough risk management process to inform our long-term business planning: climate change risk/opportunity assmts (CCRO; new global assmt (\$300k) in 2018), facility risk management (insurance assmts), environmental risk assmts (ISO14001), due diligence assmts and Good Agricultural Practices (GAP) assmts. We have already identified our key assets against physical risks (PMI and in value chain).



Adjusting our procurement patterns, relocating tobacco crop growing areas and our substantial tobacco leaf inventories, can help to mitigate short-term impacts. In 2018 we conducted a global and local water risk assessments in specific tobacco growing areas (\$200k) to better understand our exposure to changes in water availability and fine-tune our water stewardship strategy to mitigate the risk in our supply chain. PMI financially supports farmers in its supply chain to implement GAP: approx. \$20M investments including the cost to address drought and water scarcity issues, e.g. in Philippines where we supported 60 farmers to implement drip irrigation practices to address and manage water risk. We also conducted trials on drought tolerant seed varieties.  
2018 management cost: \$0.5M for various risk assmts plus \$20M GAP initiatives.

**Cost of management**

20,500,000

**Comment**

The associated costs are part of the budget to execute our Good Agricultural Practice (GAP) program and the related sustainable tobacco production initiatives with the goal to catalyze environmental friendly growing practices and sustainable tobacco production. An annual budget is allocated to initiatives to promote the adoption of improved and innovative practices by the farmers in our supply chain. Similar yearly investment is expected over the next 10-12 years.

---

**Identifier**

Risk 3

**Where in the value chain does the risk driver occur?**

Supply chain

**Risk type**

Transition risk

**Primary climate-related risk driver**

Market: Increased cost of raw materials

**Type of financial impact**

Increased production costs due to changing input prices (e.g., energy, water) and output requirements (e.g., waste treatment)

**Company- specific description**

Increased production costs for farmers in the supply chain due to changing input prices, specifically diesel costs. For PMI this has an impact on procurement expenditure on tobacco from third-party leaf suppliers and directly contracted farmers.

Diesel is widely used in many farming practices. PMI's supply chain and its purchases of tobacco leaf are influenced by the cost of production for farmers. Energy is a significant cost in farming practice in relation to the mechanical equipment used. If diesel prices increase, the overall cost of producing raw tobacco at directly contracted farms, as well as the cost of sourcing tobacco from third-party leaf suppliers, will increase as a result. This in turn would cause an associated indirect increase in procurement costs as the price of tobacco will respond to upward pressure on the cost of production, based on surveyed data collected from farmers. A key factor in diesel prices is global oil prices, which are expected to have different developments depending on the transition pathway taken at a global level. Under transition pathways aligned to 2 degrees scenario or below, the oil demand will be lower than under scenarios associated with greater temperature increases. As such the expected increase in oil prices and indirectly tobacco prices paid by PMI is lower in a 2 degree scenario. The financial risk and impact is described in the "explanation of financial impact figure" section.

PMI supports the use of low-carbon energies, such as solar and sustainably managed biofuels. In 2018, 46% of flue-cured tobacco we purchased (mainly in Pakistan, Philippines, Indonesia, Italy, Spain, Malawi, Mozambique, Mexico, Brazil and Argentina) was cured using renewable and traceable fuels (2017: 36%), while 33% of the fuel was sustainably sourced firewood and 13% came from other biomass. By 2020 we target a proportion of flue-cured tobacco purchased cured with renewable fuel sources equal to 70%, to support minimizing the impact associated with diesel costs and production costs, and we have the long term aim to achieve 100%. The reduced dependency of our tobacco supply chain on fossil fuels, not only addresses the mid-long term transition risk of increasing cost of sourcing diesel for tobacco farmers and related impact due to raising production cost but also tackle GHG emissions reduction and the overall climate change risk.

**Time horizon**

Long-term

**Likelihood**

More likely than not

**Magnitude of impact**

Medium-low

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

**Potential financial impact figure – minimum (currency)**

110,000,000

**Potential financial impact figure – maximum (currency)**

225,000,000

**Explanation of financial impact figure**

Diesel price was modelled between 2017 and 2030 using the International Energy Agency (IEA) scenario data for projected oil price, and the assumption that the ratio between oil and diesel price will remain constant from current figures. The cost of diesel to farmers as a portion of total cost of production was estimated using public data sources on typical cost shares for similar agricultural products. This share was then applied to the current and future forecasted procurement spend on tobacco by PMI each year. It was then assumed that the PMI procurement expenditure on tobacco would remain constant in a business as usual scenario, and increase by the same rate as diesel price under climate change scenarios. The result after the application of the aforementioned calculation methodology, and factoring farmers' uptake of new technologies, renewables and future forecasted tobacco requirements, was that the potential financial impact of the risk could be in a range of \$110M to \$225M.

**Management method**

Since 2002 we are implementing GAP, a program with mandatory requirements for our tobacco suppliers, which provides specific guidance on initiatives to mitigate tobacco growing risks and impacts related to climate change. Strategic initiatives include improving efficiency and switching to low-carbon energies. We financially supports farmers in our supply chain to implement GAP including the cost to improve curing barn efficiency and switch to renewables: approx. \$20M investments in 2018 (reflected as cost of management).

In 2018, gradual switch to renewable sources and efficiency led to:

- 46% of flue-cured tobacco we purchased was cured using renewable and traceable fuels
- 33% of the fuel was sustainably sourced firewood (13% other biomass)



- flue-curing GHG emissions intensity was 47% lower in 2018 (vs. 2010)
  - reduction of 170,000 tons of CO<sub>2</sub>e (vs. 2017)
  - reduced indirect (scope 3) emissions through tobacco barns upgrades
  - increased collaboration with PMI Leaf suppliers strengthening working relationship and fostering additional collaboration on climate change related risks, and in other areas that may have a positive impact on our business and share value with society.
- We released our Responsible Sourcing Principles, a comprehensive and systematic approach to address supply chain sustainability beyond our agricultural supply chain encouraged suppliers to minimize their environmental impacts, especially regarding land use, waste, emissions, energy and water consumption

**Cost of management**

20,000,000

**Comment**

The associated costs are part of the budget to execute our Good Agricultural Practice (GAP) program and the related sustainable tobacco production initiatives with the goal to catalyze environmental friendly growing practices and sustainable tobacco production. An annual budget is allocated to initiatives to promote the adoption of improved and innovative practices by the farmers in our supply chain. Similar yearly investment is expected over the next 10-12 years.

**C2.4**

**(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?**

Yes

**C2.4a**

**(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.**



**Identifier**

Opp1

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Energy source

**Primary climate-related opportunity driver**

Use of supportive policy incentives

**Type of financial impact**

Reduced operational costs (e.g., through use of lowest cost abatement)

**Company-specific description**

Compliance with country specific legislation provides PMI with the opportunity to reduce energy consumption, lower CO2 emissions, and reduce our operational costs. This is embedded into our “zero carbon factory” strategy, the annual and long range plans to increase the use of renewable energy in our manufacturing sites, increasing either self-generation and/or purchases.

Such opportunities exist in the form of:

- i) EU Emission Trading Scheme (ETS): Opportunities are linked to widening the EU ETS carbon trading market to include EU accession countries where PMI has facilities. Opportunities also exist in other regions (e.g. Mexico) where PMI has facilities that are considering introducing similar schemes. There is the potential to use our experience of these schemes to enable generation of carbon credits, in excess of our internal requirements and needs to offset emissions. Starting from EU affiliates which were in the EU ETS in the past (for example Germany, which was de-listed in 2018 as it moved below the total combustion capacity threshold), there is the potential to trade internally with other PMI affiliates and generate energy and CO2 savings.
- ii) Energy taxes, such as in our 2 facilities located in Germany, which encouraged PMI to implement an Energy Management Program following the ISO 50001 standard that allows us to reduce energy tax costs. Also, our Switzerland affiliate obtained CO2 tax exemptions due to energy saving programs in place within PMI.



iii) Energy Efficiency Directive – promoting energy reduction at source (all EU factories) and reviewing the potential for combined heat and power generation.

**Time horizon**

Current

**Likelihood**

Likely

**Magnitude of impact**

Low

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

1,800,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

The opportunity for the expansion of the EU ETS is estimated at up to \$1M based on current financial exposure in the EU and potential future inclusion of larger manufacturing centers such as in Romania or Greece. We estimate the impact of energy taxes to be around \$800k related to energy tax reduction in both our German facilities based on ISO 50001 certification.

**Strategy to realize opportunity**

PMI's "zero carbon factory" strategy includes:

- elimination of losses and improvement of operational efficiency;
- increase in the use of renewable energy;



- offset of remaining carbon emissions and/or implementing inseting projects in our value chain.

Options to self-generate and/or purchase renewable energy are evaluated based on local facilities data, our Energy Management Program and regulatory radar screen. We have deployed energy monitoring and targeting software in our facilities to assess energy intensities by process with site level reports and generation figures, and ensure that best practices can be shared and quickly applied in other locations. Between 2016 and 2018 we focused on benchmarking our utilities performance and implementation of programs to upgrade low performing systems, e.g. in our facility in Germany a 20% improvement resulted from the identification and remediation of losses in compressed air usage, leading to increased efficiency throughout manufacturing processes and utilities in 2018. Regional Coordinators and Factory Managers were trained to embed energy saving strategies (performance tracking, pinch analysis, theoretical limit analysis, baseload reduction, etc.). The cost of management over the next 3 to 5 years is estimated as:

- \$30M range of investments
- \$1M energy monitoring system operating costs
- \$0.5M for ISO 50001 implementation and certification

**Cost to realize opportunity**

31,500,000

**Comment**

The cost includes capital investments to self-generate renewable energy and increase manufacturing processes efficiency over the next 3 to 5 years.

---

**Identifier**

Opp2

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Energy source



**Primary climate-related opportunity driver**

Use of supportive policy incentives

**Type of financial impact**

Reduced operational costs (e.g., through use of lowest cost abatement)

**Company-specific description**

To accelerate the transition to a low carbon economy it is anticipated that policy levers to reduce cost barriers for deployment of renewable technologies will be required. This is likely to include the introduction of subsidies for energy generation which have already been a feature in many markets and used successfully to support the commercialization of renewable technologies making them cost competitive with conventional alternatives. The scale of these subsidies and corresponding total cost of energy for renewables is expected to be higher under a 2 degree scenario. Subsidies for renewable energy self-generation in different countries, which are factored into our cost-benefit analyses for pertinent projects so that improved return on investment can potentially be delivered. Cost-Benefit analysis and renewable energy assessments have been performed in our facilities located in Turkey, Philippines, Portugal, Italy and Poland. We also have the potential to identify and support Clean Development Mechanism (CDM) project opportunities for our tobacco leaf suppliers. PMI could access subsidies for renewable energy generation in different countries where has operations, for example in Italy and Philippines, and any unused energy could be sold back to the grid, creating a new source of revenue for PMI as well as significant savings on energy costs.

This is embedded into our environmental strategy, annual and long range plans to increase the use of renewable energy in our manufacturing sites, increasing either self-generation and/or purchases.

**Time horizon**

Short-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium-low

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

100,000,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

The levelised cost of energy (LCOE) for renewable and non-renewable sources was modelled between 2017-2020, drawing from scenario data under 2 degree scenario. This LCOE metric is a useful summary of the lifetime cost of energy incorporating a range of factors associated with the type of generating asset including subsidies. The LCOE has been used to compare the benefit of moving to renewables for energy generation with the current operational expenditure on energy at PMI sites assumed to remain constant in business as usual (BAU) scenario. This LCOE is applied to the current PMI operational energy spend on to compare the cost of energy of the BAU scenario with a fully renewable uptake over the time horizon considered. The approximate financial impact of this analysis is \$100M. We also estimate the overall impact of subsidies for renewable energy generation to our various locations throughout the globe to be over \$1M based on the incentives considered in the renewable projects planned.

**Strategy to realize opportunity**

PMI's "zero carbon factory" strategy includes:

- elimination of losses and improvement of operational efficiency
- increase in the use of renewable energy
- offset of remaining carbon emissions and/or implement insetting projects in our value chain

Options to self-generate and/or purchase renewable energy are evaluated based on analysis of local facilities data, our Energy Management Program and regulatory radar screen. Decisions to mitigate climate-related transition risk due to increased cost to source energy for our operations is taken with the support of a Marginal Abatement Cost Curve (MACC) and an internal carbon price (USD 17 per ton CO<sub>2</sub>e) which help internally to prioritize renewable energy generation and GHG reduction projects. As an example of carbon price usage, in 2018 our factory in Batangas (Philippines) invested in a 2.5 MW power plant converting solar energy to electricity through photovoltaic modules. The installation is the largest of its kind in PMI, and follows in the footsteps of PMI affiliates in Pakistan and Indonesia. The power plant produces 3,500 MWh of electricity annually, with an expected reduction in CO<sub>2</sub>e emissions of more than 2,000 tons per year. The project supports the Philippines



government's Renewable Energy Roadmap 2017–2040. We estimate a cost of management of \$90M (an annual budget for capital expenditures in a range of \$ 7-9 M over a 10-12 years' timeframe), based on previous investments and number of facilities to switch to renewables.

**Cost to realize opportunity**

90,000,000

**Comment**

For this opportunity the cost include capital investments to self-generate renewable energy and increase manufacturing processes efficiency in a forward-looking 10-12 years' timeframe.

**Identifier**

Opp3

**Where in the value chain does the opportunity occur?**

Supply Chain

**Opportunity type**

Energy source

**Primary climate-related opportunity driver**

Use of lower-emission sources of energy

**Type of financial impact**

Other, please specify

Reputational benefit and supply chain engagement

**Company-specific description**

As alternatives to fossil fuels become more readily available and cost comparative to their conventional counterparts, it becomes attractive for tobacco farmers to switch from fossil fuels to low carbon energy sources. In addition to the change in fuels used, farms may become more efficient thanks to new technologies; if PMI continues to invest in programs to improve agricultural practices and encourage the uptake of low



carbon equipment, farmers' expenditure on fuel and energy inputs will fall. The speed of this fall in costs will be dependent on the global trends in fossil fuel prices both due to oil markets and the implementation of carbon pricing mechanisms. A fall in costs of production should be reflected in increased revenues for the farmers. The reduced dependency of our tobacco supply chain on fossil fuels, is an opportunity in the short term for tobacco farmers and tackles GHG emissions reduction and in that perspective is an opportunity for PMI to reduce its environmental footprint and positively contribute to reverse climate change. The focus of incentivizing best practice in PMI's supply chain, where the higher proportion of our carbon footprint impact lies, responds to the increasing interest for environmental issues from our stakeholders and could enhance PMI's reputation and create corporate value. Moreover, through investment in programs to improve agricultural practices, PMI is expecting to ameliorate farmers' conditions and resilience to climate change risks and thus will benefit by strengthening engagement and collaboration with them.

**Time horizon**

Short-term

**Likelihood**

Likely

**Magnitude of impact**

Medium-low

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

1

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact figure**

The \$1 financial impact (FI) reported is a symbolic figure since PMI's opportunity lies in intangible benefits such as enhancing its corporate reputation by minimizing its supply chain environmental impact.

Diesel price was used as a proxy for prices of relevant fossil fuel used on farms and modelled between 2017 and 2030 using data from International Energy Agency (IEA) scenario to project oil price. The procurement expenditure attributable to diesel for tobacco farmers was assumed to remain constant in business as usual (BAU) scenario then increased by the same rate as diesel price under the climate change scenarios (CCS); it was assumed that if fossil fuel requirements fall to maintain a cost neutral position on fuel and energy inputs, then tobacco farmers would save on this cost increase that would otherwise take place. The FI was therefore calculated as the difference between the procurement expenditure attributable to diesel for tobacco farmers in BAU and under the 2 degrees CCS.

### **Strategy to realize opportunity**

Since 2002 we implement GAP, set of mandatory requirements for our tobacco suppliers, providing specific guidance on initiatives to mitigate tobacco growing risks and impacts on climate change. Strategic initiatives include improving efficiency and switching to low-carbon energies. PMI financially supports farmers in its supply chain to implement GAP including to improve curing barn efficiency and switch to renewables: approx. \$20M investments in 2018.

In 2018, gradual switch to renewable sources and efficiency led to:

- 46% of flue-cured tobacco we purchased was cured using renewable and traceable fuels
- flue-curing GHG emissions intensity was 47% lower in 2018 (vs. 2010)
- reduction of 170,000 tons of CO<sub>2</sub>e (vs. 2017)
- reduced indirect (scope 3) emissions via tobacco barns upgrades
- increased collaboration with PMI tobacco suppliers on climate change related risks, and also in other areas that may have a positive impact and create share value with society
- reduced dependency of our tobacco supply chain on fossil fuels, and opportunity to reduce production cost
- a more inclusive and systematic approach to address supply chain sustainability beyond our agricultural supply chain encouraged suppliers to minimize their environmental impacts, especially about land use, waste, emissions, energy and water consumption
- implement actions that contribute to a more sustainable future.

Cost of management is the GAP implementation cost over the next 5 years and estimated at \$100M

### **Cost to realize opportunity**

100,000,000

### **Comment**

The associated costs are part of the budget to execute our Good Agricultural Practice (GAP) program and the related sustainable tobacco production initiatives with the goal to catalyze environmental friendly growing practices and sustainable tobacco production. An annual budget is allocated to initiatives to promote the adoption of improved and innovative practices by the farmers in our supply chain. Similar yearly investment is expected in the following 5 years.

## C2.5

### (C2.5) Describe where and how the identified risks and opportunities have impacted your business.

	Impact	Description
Products and services	Not yet impacted	<p>Environmental reputation may become a more significant factor of our customers' purchasing decisions in the future, potentially impacting our sales. At this time, we do not see this risk/opportunity as significant. In the short and mid-term (3-6 years), we believe that the potential financial opportunity of shifting consumer preferences toward more environmentally-friendly products and successful product developments could provide meaningful business opportunities. We expect the magnitude of impact to our direct operations to be medium-low. We are looking into initiatives to build closer cooperation within our value chain and provide us with insights for our product development strategy, and help our stakeholders understand environmental impacts of our products. Our consumer insights research indeed helps us understand the potential market for eco-product developments. We also closely follow consumer and market sustainability trends and engage with our suppliers on the development of new materials to be in line with these growing trends. This includes conducting carbon footprint assessments of new products (e.g. new smoke-free products) and strengthening our product lifecycle assessments (LCA), especially around the upstream environmental impacts of different material alternatives (e.g. for packaging components). In 2016, with the ramping up of our new smoke-free products, an external consultant worked with our EHS department to develop RRP related LCAs to understand their impacts on our carbon footprint. Plans have been implemented in product development, manufacturing, distribution and rest of the value chain to mitigate these impacts. To meet the growing interest of our key accounts/retailers in sustainability practices, we continue to increase our emphasis on our products' LCA within our value chain and provide company information on our sustainability performance. Appropriate product labelling of sustainability performance for PMI's customers and consumers would be the outcome of a rigorous verified product LCA of PMI's products to identify their life cycle CO2 emissions performance. Currently there are no global product environmental labelling</p>

		standards that could coherently be applied to tobacco products. Should product environmental labelling be required for PMI's products, we estimate a cost of over \$250K excluding manufacturing costs for labelling.
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	Physical climate change risks could affect, with a medium-low impact, our own operations and those of our suppliers globally. Changes in precipitation patterns and extreme variability in weather patterns could affect the yield, quality and availability of our important crops, such as tobacco leaves and cloves, changing our buying patterns and increasing operational costs. Water-short leaf growing areas could benefit from increases in precipitation due to increases in soil moisture, which could positively impact tobacco crop patterns and quality. Year-round production could become more applicable. Steady rainfall could provide a steady wet season for clove growing areas, increasing production volumes and improving quality. A slight increase in temperature may lengthen the tobacco growing season in some regions leading to a potential tobacco yield improvement. In addition, temperature increase may also reduce the need for fuel (wood) in tobacco curing. Financial impact of reduced fuel costs for tobacco farmers may materialize in a range of \$ 1 M per year. On the other hand, increased drought/flooding could disturb the tobacco leaf life cycle stages from the over 27 countries we source from in 2018. PMI has invested around \$300k since 2018 to support 60 farmers in the Philippines with irrigation, focusing on more sound and efficient technologies (e.g. drip irrigation) contributing to climate change mitigation efforts. Flooding may require pumping of excess water; similarly, extreme droughts may require long-term irrigation, both of which increase energy consumption and production costs. Extreme rainfall could damage our buildings and goods, increasing our management costs and insurance fees. Rising sea levels in areas near our leaf growing, manufacturing and warehouses (e.g. Netherlands and some Asian sites), could cause sourcing delays and manufacturing impacts, disrupting production volumes and danger for our farmers and employees. The financial implications of these risks vary depending on the asset that is impacted. Some of the risks identified are the threat of flooding and cyclones in the Philippines, Russia, Hungary, Italy, and Japan that could cause damage in our operations sites estimated in the range of \$10-25M for each location according to our insurer estimation.
Adaptation and mitigation activities	Impacted	PMI's operations and supply chain are widely spread, mitigating the effects of severe catastrophic climatic disruption which results in a medium-low risk. PMI's business continuity management plans are designed to mitigate the consequence of supply chain interruption and disruption caused. Wider best practice sharing approach and individual energy/CO2 saving projects involve specific investments of approximately \$10M per year to help achieve our GHG reduction goals. Tools to identify significant risks and/or opportunities from climate



		<p>change to inform our long-term business planning (described in risk 2 management method) have identify our key assets at risk of climate change impacts (both PMI factories/offices/warehouses owned and in our entire value chain). We invested around \$200k in this global risk assessment and the main costs in 2015 were to update that with external expert support, internal time and resources estimated at \$100k. The financial implications of these risks vary depending on the asset impacted. Some of the risks identified are the threat of flooding and cyclones in the Philippines, Russia, Hungary, Italy, and Japan that could cause damage in our manufacturing and warehouse sites estimated in a range of \$10-25M for each location according to our insurer estimation.</p> <p>For instance, some of the risks identified are the threat of flooding which may be responded to by raising key equipment, sealing below-grade openings, or improving flood emergency response plans; windstorms such as hurricanes and typhoon exposure identified improvements to roof securement, protection of windows and building openings, and Preparedness and Response plans.</p> <p>Damage to raw materials and finished goods or crop failures or tobacco shortages could escalate each to around \$100M but both are considered very unlikely. Adjustments to our procurement patterns, relocating tobacco crop growing areas and our substantial tobacco leaf inventories can help to mitigate short-term impacts. Findings from our assessments on climate and water risk to leaf production facilities helped better understand our exposure to changes in water availability and developed a water stewardship strategy and measures to support farmers and/or remove the risk from our supply chain.</p> <p>Efforts to reduce emissions are explained in risk 3 management method.</p>
Investment in R&D	Impacted	<p>Today's consumers expect to see more sustainable products that reduce environmental impacts. Ever-increasing environmental awareness of consumers influences their product selection and buying decisions and we evaluated a medium to low impact in the long term due to shift of consumer preferences. Our consumer insights research helps us understand the potential market for eco-product developments. We estimate successful product developments could provide benefits of over \$ 10M in the short-term. We are shared-owner of Profigen, a tobacco seed producer company, and we also invest to developing drought tolerant tobacco seed varieties as low impact opportunity. We conducted field trials to test their performances for example in the Philippines.</p> <p>Our ambition toward a smoke-free future, replacing cigarettes with Reduced Risk Products (RRPs), initiated fundamental changes to our operating model, organizational structure and culture in 2017 and accelerated our evolution into a consumer-centric, technology and science-driven company. In 2016, with the ramping up of our</p>

		<p>Reduced Risk Products (RRPs) and to raise awareness of their associated potential environmental impact, we worked with an external consultant to develop LCAs around RRP's to understand the impacts these have on our carbon footprint. LCAs are an integral part of our R&amp;D. Plans have been implemented in product development, manufacturing, distribution and rest of the value chain to mitigate these impacts. Elements of our carbon footprint have been modelled using the LCA tool, Simapro. For our base year in 2010, we undertook a third party review against ISO 14040 series of standards and the draft Scope 3 Accounting and Reporting Standard as released by the WBCSD/WRI GHG Protocol Initiative. The LCA projects, including revisiting elements of our carbon footprint assessment cost approximately \$100k in 2015.</p>
Operations	Impacted	<p>Our operations across the globe are subject to various climate-related regulations that can have a medium-low impact in the short and mid-term. A clear international trend towards increasing and stricter climate-related regulations exists. Though compliance with country-specific legislation increases operating costs, it provides PMI with the opportunity to reduce energy consumption, CO2 emissions and operational costs. Such opportunities exist in the form of:</p> <p>i) Renewable energy generation subsidies are factored into our cost-benefit analyses to improve return on investment, estimated to be over \$1M throughout our global operations. We have performed these for Turkey, Philippines, Portugal and Poland sites ;ii) CO2 related schemes such as the EU Emission Trading Scheme (EU ETS), which covers, in December 31, 2018, 2 PMI owned and operated factories in Netherlands and Italy, with total verified emissions of over 40,000 metric tons of CO2 in 2018. Although the cost of EU ETS carbon credits have been lower in the past years due to a surplus of allowances, the cost of allowances is expected to increase due to stricter regulations and long-term reforms to reduce oversupply. Based on only 1 EU ETS factory in 2016, the annual cost of emissions allowances is expected to be up to \$50K in the short term. Expanding the EU ETS to include EU accession countries where PMI has facilities provides us with the opportunity to apply our experience in these new countries or other regions considering introducing similar schemes (e.g. Mexico). In 2018, one of our EU affiliates (Germany) was de-listed from the EU ETS as it moved below the total combustion capacity threshold. There is the potential to trade internally with other PMI affiliates and generate energy and CO2 savings;</p> <p>iii) Energy taxes, such as in Germany, encouraged us to implement an Energy Management Program to ISO 50001, saving us an estimated \$800k in energy tax reductions. For our global operations, such levies and taxes are estimated at around \$2M;</p>

		iv) Energy Efficiency Directive, Incentives & Infrastructure/Buildings upgrade – promoting energy reduction at source (all EU factories), reviewing the potential for combined heat and power, promoting renewable energy and buildings upgrade. Managing tighter environmental reporting regulations in the future could cost over \$1M per year across our global facilities.
Other, please specify	We have not identified any risks or opportunities	There are no other risk or opportunities that have impacted our business.

## C2.6

**(C2.6) Describe where and how the identified risks and opportunities have been factored into your financial planning process.**

	Relevance	Description
Revenues	Not yet impacted	Today's consumers expect to see more sustainable products that reduce environmental impact. Ever-increasing environmental awareness of consumers influences their product selection and buying decisions. Our robust environmental management systems and science based climate-related targets help prepare us for this. We, however, have not seen a significant impact of these consumer preferences on our revenues. We estimate successful product developments could provide benefits of over \$10M in the medium- to long-term. Our consumer insights research helps us understand the potential market for eco-product developments. Based on the management and controls we have in place and our review of climate change risks, risks and opportunities related to climate change have not had, and are not expected to have, a material adverse effect on our consolidated results of earnings or competitive position.
Operating costs	Impacted for some suppliers, facilities, or product lines	We have a consistent environmental and occupational health and safety management system at all our manufacturing centers. Based on the systems we have in place and our review of climate change risks, environmental expenditures have not had, and are not expected to have, a material adverse effect on financial statements. Our operations spread throughout the globe are subject to various climate-related regulations. Our Energy Management Program and regulatory radar screen helps reduce compliance costs and reduce energy use, CO2 emissions, and operational costs. We incorporate these in our financial planning processes through: i) Renewable energy generation subsidies are factored into our cost-benefit analyses estimated to be over \$1M

		<p>throughout our global operations. We have performed these for our Turkey, Philippines, Portugal and Poland sites. ii) CO2 related schemes such as the EU Emission Trading Scheme (EU ETS), which covers our manufacturing centers in Italy and Netherlands. Cost of allowances is expected to increase due to stricter regulations and long-term reforms to reduce oversupply. Based on only 1 PMI EU ETS factory in 2016, the annual cost of emissions allowances is expected to be up to \$50K in the short term. In 2018, one of our EU affiliates (Germany) was de-listed from the EU ETS as it moved below the total combustion capacity threshold), there is the potential to trade internally with other PMI affiliates. iii) Energy taxes, such as in Germany, encouraged PMI to implement an Energy Management Program to ISO 50001, saving us an estimated \$800k in energy taxes. Such taxes are estimated at around \$2M for our global operations. iv) Regarding sourcing of our important raw materials, we continually review potential new tobacco leaf and clove growing areas and assess if climate change elements could increase yield. We are also developing drought tolerant seed varieties since 2015. We implement Good Agricultural Practices (GAP), a comprehensive program that include mandatory requirements for our tobacco suppliers and is coordinated by the PMI Leaf Department who provide specific guidance on implementation to regional agronomy teams. Curing barn improvement guidance is provided. Barn efficiency improvement costs can be a few hundred dollars per barn but overall carbon improvement programs for farmers run to approximately \$3.5M per year.</p>
Capital expenditures / capital allocation	Impacted	<p>We are continuing our Marginal Abatement Cost Curve (MACC) approach to identify where to act by comparing and ranking all our GHG reduction projects globally based on their cost-effectiveness in reducing emissions. We have also set an internal carbon price (USD 17 per ton CO2e), necessary to drive the investments needed, and we use MACC to refresh and enhance our list of initiatives. As an example in 2018 we implemented a 2.5MW power solar photovoltaic plant in one of our facilities in the Philippines. ,.</p> <p>As an example of financial impact is the specific investments of around \$10M/year in our energy management program or the around \$200K/year in maintaining our global energy metering and targeting system. Based on the investments made in previous years we evaluated an expected annual budget for capital expenditures in a range of \$7-9M per year over a 10-12 years' timeframe.</p>
Acquisitions and divestments	Not impacted	<p>Our subsidiaries expect to continue to make investments in order to drive improved performance and maintain compliance with environmental laws and regulations. We assess and report the compliance status of all our legal entities on a regular basis. Based on the management and controls we have in place and our review of climate change risks (both physical and regulatory), risks and opportunities related to climate change have not</p>

		had, and are not expected to have, a material adverse effect on our consolidated results of operations, capital expenditures, financial position, earnings or competitive position. Therefore these factors do not impact our acquisition and divestment planning.
Access to capital	Not yet impacted	Stakeholder interest in climate change adaptation is increasing as the effects of climate change become more apparent. PMI strives to actively manage its reputation through corporate sustainability and climate change strategy, programs and transparent communications including our website, our sustainability report, CDP disclosure, new products LCA (e.g. smoke-free products) and packaging developments. In addition, PMI's Board of Directors believes that environmental, social, and governance (ESG) factors relevant to the company's business are important to PMI's long-term success. The Board's sustainability oversight was more formally established at the beginning of 2018 when its Nominating and Corporate Governance Committee was given the mandate to oversee the sustainability strategy and performance, and to advise the Board on sustainability matters. Part of the Board's oversight is a focus on management's efforts to enhance shareholder value responsibly and sustainably. PMI has robust ESG commitments and monitors investors and shareholders interest in this area, as shown by our commitment to CDP. However, we currently do not expect risk and opportunities to impact PMI's access to capital significantly in the short and medium term.
Assets	Impacted	<p>We have an extensive risk control program whereby locations with values exceeding \$30 million are surveyed by engineers from our property insurer including physical risks. We have a number of locations that do have natural catastrophe exposures including flood risk, however this is addressed through risk improvement recommendations for physical mitigation solutions or implementation/reinforcement of management (administrative) controls such as protect openings, raise equipment, and implement Flood Emergency Response Plans. In 2018 we had worldwide less than a dozen natural catastrophe related recommendations worldwide that exceed a \$10 million loss expectancy.</p> <p>The process included key assets such as factories/warehouses, supplier's processing facilities/warehouses, as well as ports, and tobacco growing regions.</p> <p>Some of the risks identified are the threat of flooding and cyclones in the Philippines, Russia, Hungary, Italy, and Japan that could cause damage in our manufacturing and warehouse sites estimated in the range of \$10-25M for each location according to our insurer estimation.</p> <p>This information is reviewed regularly with top management. It enables risk/opportunity identification and</p>

		management at the company and asset level. Our substantial tobacco leaf inventories can help mitigate short term impacts in our tobacco supply chain.
Liabilities	Not impacted	Based on the management and controls we have in place (e.g. Site surveys performed as part of our risk control program by our property insurer) and our review of climate change risks (both physical and regulatory), risks and opportunities related to climate change have not had, and are not expected to have, a material adverse effect on our liabilities.
Other	We have not identified any risks or opportunities	There are no other risk or opportunities that have impacted our business and have influenced our financial planning process.

## C3. Business Strategy

### C3.1

**(C3.1) Are climate-related issues integrated into your business strategy?**

Yes

#### C3.1a

**(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?**

Yes, qualitative and quantitative

### **C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b**

**(C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b) Indicate whether your organization has developed a low-carbon transition plan to support the long-term business strategy.**

Yes

## C3.1c

### **(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.**

#### **1. Business objectives and strategy influenced by climate-related issues**

Climate change is embedded within our business strategy through our Guidebook for Success (Code of Conduct), Responsible Sourcing Principles (RSP) and Good Agricultural Practices (GAP). It is integrated into normal business activities, forms part of our annual Long Range Planning process which reviews and sets business direction, and performance appraisal process. In 2018, the strategy was reviewed based on prior year performance, sustainability commitments and objectives, regulatory/external factors risk/opportunity assessments, stakeholder interest and business changes by functional management up to our Senior Management Team.

For PMI, sustainability means creating long-term value while minimizing the negative externalities associated with our products, operations and value chain. We have an important impact on our communities and environment that we are committed to address. In a world with a changing climate, respecting and protecting the environment is something all our employees and partners can get behind.

In 2018, we conducted a new sustainability materiality assessment, which enabled us to further embed sustainability across PMI's strategies. Climate Change, emissions, energy, biodiversity, deforestation and land use all emerged as tier 1 topics and are prioritized in our overall sustainability strategy. We buy around 330,000 tons of tobacco annually and operate 44 production facilities hence have to be mindful of our impact on the environment.

Minimizing this impact is a top priority that we address through carbon reduction initiatives, use of renewable energy and combating deforestation.

We launched a dedicated project to achieve carbon neutrality in our manufacturing plant going beyond our current reduction metrics.

For our 2018 Sustainability Report we followed UN Global Compact and its (and GRI) principles and reporting requirements. We are part of the World Business Council for Sustainable Development (WBCSD), WeMeanBusiness coalition and with our participation to the UNFCCC COP21 in Paris and our support to the Paris Agreement, we have continued to engage and demonstrate our commitments to climate change adaptation and mitigation, enhanced through the development and approval of our science-based targets

#### **2. Business strategy linked to an emissions reduction target - a strategic advantage**

We have ambitious targets to reduce emissions and setting those targets enables us to focus priority and resources to maximize our impacts/efforts.

- 2020 targets for scope 1&2: -30% vs. 2010 already surpassed in 2018 with 36% reduction
- 2020 targets across our value chain: 30% vs. 2010
- 2030 targets across value chain: 40% vs. 2010

Our climate change strategy including a long-term commitment to science-based, climate-related targets, has a key role in enabling our business efficiency which keeps us ahead of our competitors and believe that fulfilling our reduction targets puts us in a better strategic position vs our

competitors when customers/investors assess our performance; for example, participating to CDP Supply Chain and sharing our GHG reduction strategy with our Finnish customer S-Group/SOK.

In terms of our products, by embedding LCA into the design and development process of our new products we are able to improve the quality and life span of the new RRP's devices (including the battery life span) reducing their carbon footprint

### **3. PMI's short term strategy - an effective risk management, emissions reduction and renewable energy strategy development**

- Direct materials supplier program
- Engaging suppliers in various ways (energy efficiency, use of renewable, sustainable fuels). In 2017, we released our RSP and Implementation Guidelines, which established the foundations to address supply chain sustainability beyond our agricultural supply chain.
- Energy Management Program consisting of a worldwide factory metering
- 4-year green energy procurement roadmap
- Central governance for on-site renewable investments
- Lifecycle Assessments (LCAs) in cigarette/packaging components and new products
- Annual GHG footprint
- Action plans for mitigating risks highlighted in 2018's climate change risk assessment

### **4. PMI's long-term business strategy - focus on physical adaptation and long-term emissions reduction**

- Approved science-based targets to reduce both our operations' and our value chain absolute carbon footprint by 40% by 2030 vs 2010 & 60% by 2040
- Climate change risk assessments (CCRA) – described in C2.2b – to inform future management decisions in terms of agricultural impacts and forecast physical changes that may occur in certain climates and countries (adaptation focus).
- Long-term sourcing strategies: Our agricultural supply chain is widely spread around the world, which helps to mitigate climate related risks allowing to relocate tobacco crops. We continually review potentially new tobacco leaf and clove growing areas and assess if climate change elements could increase yield. We are also actively developing drought and flood tolerant seed varieties.
- Customer and supplier sustainability strategies aligned with ours to ensure that our value chain progress supports our objectives

### **5. Substantial business decisions influenced by the climate change**

Our strategy and decisions are influenced by understanding and adapting to potential future climate change issues and by minimizing our environmental impact. We integrate climate related physical and transition risks and opportunities related to regulation, reputation and market by:

- a) Implementing carbon emission reduction projects with longer payback period such as the 2.5 MW photovoltaic power plant in our factory in Philippines as well as smaller projects like 2 biomass boilers in Mexico. Overall, \$90 M worth in climate change-related projects have been invested since 2010
- b) Sourcing voluntary green electricity to decrease our dependence from fossil fuels and reduce our carbon footprint



c) Embedding environmental sustainability considerations in our GAP and RSP since 2002 and 2017 respectively. Specifically in our tobacco supply chain we aim at a 70% CO2e intensity reduction in curing by 2020 vs 2010; zero coal usage in our manufacturing facilities and for tobacco curing; no deforestation of old growth forest due to the growing and curing of tobacco we purchase.

Our decision in 2018 to have a net positive impact by 2025 on forest associated with our tobacco supply chain is set to combat deforestation, one of the main contributors to climate change

**6. Paris Agreement influenced our business strategy**

PMI supported the call for a price on carbon in the Paris Climate Agreement. Our targets, recognized by the Science-Based Targets initiative in 2017, demonstrate how PMI can contribute to keeping global warming below 2°C based on pre-industrial levels (<https://www.pmi.com/resources/docs/default-source/pmi-sustainability/pmi-environmental-policy.pdf>)

**C3.1d**

**(C3.1d) Provide details of your organization’s use of climate-related scenario analysis.**

Climate-related scenarios	Details
RCP 8.5	<p>In 2015 we conducted a Climate Change Risk Assessment (CCRA) for corporate and asset level physical risks and opportunities up to 2025-2035.</p> <p>The process included key assets such as factories/warehouses, supplier’s processing facilities/warehouses, as well as ports, and tobacco growing regions. This information was reviewed with top management enabling risk/opportunity identification and management at the company and asset level; includes regulatory climate change aspects and geopolitical risk.</p> <p>The modeling exercise of the CCRA used projections for the 2025 -2035 timeframe, in order to prepare PMI for medium-long term major physical climate change risks and also assess opportunities for new tobacco growing areas. The exercise focused in the worst case ‘high emissions’ scenario RCP8.5. This information was sourced from the Coupled Model Inter-Comparison Project - Phase 5 (CMIP5) which fed into the Intergovernmental Panel on Climate Change (IPCC) in the 5th Assessment Report. This assessment focused on enhanced robustness of the assessment of future climate change and assessment of impacts to an updated list of 85 key PMI facilities (factories and warehouses) and supply chain nodes (ports, tobacco and clove growing areas and direct materials) in order to reflect the current make-up of the company.</p> <p>Future scenarios were built using the following 3-step approach:</p> <p>1) Climate change projections determine the percentage change from baseline in the future for the site in question</p>

2) Sourced from the Coupled Model Inter-Comparison Project - Phase 5 (CMIP5) which fed into the IPCC in the 5th Assessment Report

3) Projections for the 2030 timeframe (averaged over 2025 -2035) under the worst case 'high emissions' scenario RCP8.5

The data pulled from this assessment included mean values from all climate models providing projections (multi-model mean) for the whole world for each scenario and time frame for temperature, precipitation and drought. Key indicators included:

#### Drought

- Dry spell duration
- Soil moisture (by season)

#### Floods

- Mean annual precipitation (by season)
- Annual total precipitation when daily precipitation exceeds the 95th percentile of wet day precipitation
- Annual total precipitation when daily precipitation exceeds the 99th percentile of wet day precipitation
- Annual maximum 1 day precipitation
- Annual maximum 5-day precipitation

#### Tropical Cyclones

- Total annual frequency of tropical storms
- Annual frequency of Category 4 and 5 storms
- Mean lifetime maximum intensity (LMI)
- Precipitation rate <200km of storm center at time of LMI

#### Temperature

- Mean max and min temperature (by season)

Some potential risks were highlighted such as increased in drought in Greece, Colombia and Philippines tobacco growing areas which could potentially reduce farmer's ability to grow tobacco; or increased risk of flooding in some EU factories with consequences on business continuity. As a result, we developed a local water risk assessment tool for our tobacco growing areas to better understand local risks and decided to implement Alliance for Water Stewardship (AWS) standard in our factories. The implementation of those two processes and the findings enabled us to focus efforts and prioritize:

- investments in those factories where local risks have been identified;
- initiatives in collaboration with our tobacco suppliers, such as practices to improve water availability and management at farm level in Greece and Philippines.

As result of the CCRA we implemented a water stewardship strategy in our tobacco supply chain including measures to support farmers to

mitigate the water risks identified. Implementing our Good Agricultural Practice (GAP) program we worked with farmers in growing areas prone to increased drought and water scarcity issues such as in the Philippines; we supported farmers to implement drip irrigation practices to address and manage water risk, and we conducted trials on drought tolerant seed varieties.

## **C-AC3.1e/C-CE3.1e/C-CH3.1e/C-CO3.1e/C-EU3.1e/C-FB3.1e/C-MM3.1e/C-OG3.1e/C-PF3.1e/C-ST3.1e/C-TO3.1e/C-TS3.1e**

**(C-AC3.1e/C-CE3.1e/C-CH3.1e/C-CO3.1e/C-EU3.1e/C-FB3.1e/C-MM3.1e/C-OG3.1e/C-PF3.1e/C-ST3.1e/C-TO3.1e/C-TS3.1e) Disclose details of your organization's low-carbon transition plan.**

We aim to be an industry leader in environmental sustainability and have set clear and measurable targets to improve our environmental performance. In 2010, we set ourselves the goal of reducing the relative carbon footprint of our value chain by 30% by 2020. Beyond 2020, we continue to work on developing company-wide emissions reduction targets based directly on climate science. We submitted in 2016 and received approval in 2017 for our 2030 and 2040 Science Based Targets based on a new baseline footprint analysis and a forecast on how industry trends and our Manufacturing, Fleet, Leaf and supply chain emission reduction programs could perform in the mid- to long-term.

## **C4. Targets and performance**

### **C4.1**

**(C4.1) Did you have an emissions target that was active in the reporting year?**

Both absolute and intensity targets

### **C4.1a**

**(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.**



**Target reference number**

Abs 1

**Scope**

Scope 1 +2 (market-based)

**% emissions in Scope**

100

**Targeted % reduction from base year**

40

**Base year**

2010

**Start year**

2016

**Base year emissions covered by target (metric tons CO2e)**

914,050

**Target year**

2030

**Is this a science-based target?**

Yes, this target has been approved as science-based by the Science-Based Targets initiative

**% of target achieved**

90

**Target status**

Underway



**Please explain**

This target covers scope 1 and 2 emissions from owned and operated buildings, factories and fleet. In 2016 we submitted this target and it was approved by the Science Based Target initiative (SBTi) in 2017.

In 2018 we achieved 36% reduction versus our 2010 baseline and thus 90% achieved ( $36\%/40\% \times 100 = 90\%$ ). This achievement has been possible thanks to increased energy efficiency in our factories, on-site renewable investments, sourcing power from renewable resources and a program to reduce emissions in our vehicles fleet.

---

**Target reference number**

Abs 2

**Scope**

Scope 1 +2 (market-based)

**% emissions in Scope**

100

**Targeted % reduction from base year**

60

**Base year**

2010

**Start year**

2016

**Base year emissions covered by target (metric tons CO<sub>2</sub>e)**

914,050

**Target year**



2040

**Is this a science-based target?**

Yes, this target has been approved as science-based by the Science-Based Targets initiative

**% of target achieved**

60

**Target status**

Underway

**Please explain**

This target covers scope 1 and 2 emissions from owned and operated buildings, factories and fleet. In 2016 we submitted this target and it was approved by the Science Based Target initiative (SBTi) in 2017.

In 2018 we achieved a 36% reduction versus our 2010 baseline and thus 60% achieved ( $36\%/60\% \times 100 = 60\%$ ). This achievement has been possible thanks to increased energy efficiency in our factories, on-site renewable investments, sourcing power from renewable resources and a program to reduce emissions in our vehicles fleet.

---

**Target reference number**

Abs 3

**Scope**

Scope 1+2 (market-based) +3 (upstream & downstream)

**% emissions in Scope**

100

**Targeted % reduction from base year**

40



**Base year**

2010

**Start year**

2016

**Base year emissions covered by target (metric tons CO2e)**

8,348,966

**Target year**

2030

**Is this a science-based target?**

Yes, this target has been approved as science-based by the Science-Based Targets initiative

**% of target achieved**

85

**Target status**

Underway

**Please explain**

This target covers scope 1, 2 and 3 emissions from all operations and our entire value chain. In 2016 we submitted the target that was approved by the Science Based Target initiative in 2017 (SBTi).

In 2018 we achieved a 34% reduction versus our 2010 baseline and thus 85% achieved ( $34\%/40\% \times 100 = 85\%$ ). This achievement has been possible thanks to progress in reducing our environmental impact across our value chain: in our factories and fleet where our carbon footprint is relatively small compared to other industries, as well as beyond the factory gates. That includes looking at both our upstream supply chain activities (currently focusing on tobacco farming and direct materials) and downstream, following our product and packaging environmental impacts to end-of-use.



## C4.1b

**(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).**

---

**Target reference number**

Int 1

**Scope**

Scope 1+2 (market-based) + 3 (upstream and downstream)

**% emissions in Scope**

100

**Targeted % reduction from base year**

30

**Metric**

Other, please specify  
kg CO2e per million cigarette equivalent sold

**Base year**

2010

**Start year**

2012

**Normalized base year emissions covered by target (metric tons CO2e)**

8,348,966

**Target year**

2020



**Is this a science-based target?**

No, but we are reporting another target that is science-based

**% of target achieved**

82

**Target status**

Underway

**Please explain**

This target covers scope 1, 2 and 3 emissions from all operations and our full value chain per million of cigarette equivalent sold. From 2018 onwards we are reporting energy intensity based on sold units of equivalent cigarettes (versus produced units of cigarettes equivalent previously).

In 2018 we achieved a 25% reduction versus our 2010 baseline (8,942 kg CO<sub>2</sub> per million of equivalent cigarettes sold) and thus 82% achieved (25%/30%\*100=82%). This achievement has been possible due to progress in reducing our environmental impact across our value chain: in our factories and fleet where our carbon footprint is relatively small compared to other industries, as well as beyond the factory gates. That includes looking at both our upstream supply chain activities (currently focusing on tobacco farming and direct materials) and downstream, following our product and packaging environmental impacts to end-of-use.

% change anticipated in absolute scope 1+2 and scope 3 emissions are highly dependent on 2020 production volumes and ratio between conventional cigarettes vs Reduced Risk Products, that is changing continuously due to the rapid growth of RRP.

The baseline for the anticipated change is year 2018.

**% change anticipated in absolute Scope 1+2 emissions**

-8

**% change anticipated in absolute Scope 3 emissions**

-8

## C4.2

**(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.**

---

**Target**

Renewable electricity consumption

**KPI – Metric numerator**

Electricity used in manufacturing

**KPI – Metric denominator (intensity targets only)**

Total electricity used in manufacturing

**Base year**

2010

**Start year**

2016

**Target year**

2030

**KPI in baseline year**

0

**KPI in target year**

100

**% achieved in reporting year**

65



**Target Status**

Underway

**Please explain**

This target covers the amount of electricity purchased from renewable sources.

In 2018 65% of our manufacturing centers were sourcing renewable electricity versus our 2010 baseline where we were not sourcing any. Thus 65% achieved ( $65\%/100\% \times 100 = 65\%$ ). This achievement has been possible due to most European factories sourcing green electricity and for the first time our factories in Philippines and Argentina sourcing electricity from wind, solar or hydro plants. We will continue sourcing more renewable electricity as it becomes available in the countries where we operate.

**Part of emissions target**

This target is supporting the achievement of our broader carbon emissions targets covering scope 1, 2 and 3 targets.

**Is this target part of an overarching initiative?**

No, it's not part of an overarching initiative

**C4.3**

**(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.**

Yes

**C4.3a**

**(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.**

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	90	

To be implemented*	185	20,052
Implementation commenced*	37	3,987
Implemented*	77	54,735
Not to be implemented	20	

## C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

---

**Initiative type**

Other, please specify

Own vehicle fleet emissions reduction

**Description of initiative**

**Estimated annual CO2e savings (metric tonnes CO2e)**

2,506

**Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

111,358

**Investment required (unit currency – as specified in C0.4)**



0

**Payback period**

<1 year

**Estimated lifetime of the initiative**

3-5 years

**Comment**

At vehicle renewal, specifically sourcing more fuel-efficient vehicles. Investment estimated at zero as no additional cost over and above buying a less efficient equivalent vehicle.

---

**Initiative type**

Low-carbon energy purchase

**Description of initiative**

Other, please specify

Sourcing Renewable Electricity (Hydro, Solar, Wind...)

**Estimated annual CO2e savings (metric tonnes CO2e)**

42,533

**Scope**

Scope 2 (market-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

0



**Investment required (unit currency – as specified in C0.4)**

42,000

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Renewable energy (certified green electricity) procurement for most of our EU facilities, Serbia, Mexico, Colombia and Turkey which commenced in 2014 and in 2018 expanded to new countries like Argentina or Philippines. All certificates are available for 2018. Investment is the current additional amount paid for green electricity.

---

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Other, please specify

Global Energy Management Program

**Estimated annual CO2e savings (metric tonnes CO2e)**

1,284

**Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**



3,400,000

**Investment required (unit currency – as specified in C0.4)**

10,000,000

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

11-15 years

**Comment**

General improvements from our Energy Management Program in stemmeries, factories and offices we own and operate over and above individual examples shown below. We have invested over \$10M, with individual projects usually averaging 3 year payback time.

---

**Initiative type**

Low-carbon energy installation

**Description of initiative**

Natural Gas

**Estimated annual CO2e savings (metric tonnes CO2e)**

3,441

**Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

22,567

**Investment required (unit currency – as specified in C0.4)**

2,200,000

**Payback period**

>25 years

**Estimated lifetime of the initiative**

>30 years

**Comment**

In our factory in Greece, installation of natural gas piping infrastructure and transition to natural gas from Heavy fuel for 3 steam boilers

---

**Initiative type**

Low-carbon energy installation

**Description of initiative**

Biomass

**Estimated annual CO2e savings (metric tonnes CO2e)**

3,237

**Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

200,000



**Investment required (unit currency – as specified in C0.4)**

1,650,000

**Payback period**

4 - 10 years

**Estimated lifetime of the initiative**

11-15 years

**Comment**

The main CO<sub>2</sub> contributor of the emissions in our factory in México was the natural gas boiler. It was therefore decided to change to a Biomass boiler achieving a 49% CO<sub>2</sub> emissions reduction vs 2018.

---

**Initiative type**

Low-carbon energy installation

**Description of initiative**

Solar PV

**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

1,062

**Scope**

Scope 2 (market-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

381,000

**Investment required (unit currency – as specified in C0.4)**

2,800,000

**Payback period**

4 - 10 years

**Estimated lifetime of the initiative**

16-20 years

**Comment**

2.5 MW solar photo-voltaic farm grid tie system for self-consumption to use in one of our factories in Philippines

---

**Initiative type**

Energy efficiency: Building services

**Description of initiative**

HVAC

**Estimated annual CO2e savings (metric tonnes CO2e)**

390

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

97,000

**Investment required (unit currency – as specified in C0.4)**



0

**Payback period**

<1 year

**Estimated lifetime of the initiative**

21-30 years

**Comment**

- Chiller COP improvements in our factory in Philippines including
- Optimization of Chiller combination
  - removal of 3 way valves
  - optimization of Air Handling Units and overall settings

---

**Initiative type**

Energy efficiency: Building services

**Description of initiative**

HVAC

**Estimated annual CO2e savings (metric tonnes CO2e)**

132

**Scope**

Scope 2 (market-based)

**Voluntary/Mandatory**

Voluntary



**Annual monetary savings (unit currency – as specified in C0.4)**

13,800

**Investment required (unit currency – as specified in C0.4)**

24,200

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

21-30 years

**Comment**

In our factory in Russia we designed a system to optimize HVAC parameters calculated based on big Data analysis and AI.

Outcome: Optimal set point prediction based on collected internal data and trends, external data (weather forecasts, etc.) and reduction of electrical energy consumption of chiller network.

---

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Compressed air

**Estimated annual CO2e savings (metric tonnes CO2e)**

126

**Scope**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

15,809

**Investment required (unit currency – as specified in C0.4)**

151,544

**Payback period**

11-15 years

**Estimated lifetime of the initiative**

6-10 years

**Comment**

Replacing of existing fixed speed air compressor in our factory in Indonesia with Variable Speed drive type and automatic smart regulation for sequence optimization.

---

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Compressed air

**Estimated annual CO2e savings (metric tonnes CO2e)**

23

**Scope**

Scope 2 (market-based)

**Voluntary/Mandatory**



Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

6,000

**Investment required (unit currency – as specified in C0.4)**

0

**Payback period**

<1 year

**Estimated lifetime of the initiative**

6-10 years

**Comment**

Use portable compressed air for replacement of aerators for waste water treatment processes

**C4.3c**

**(C4.3c) What methods do you use to drive investment in emissions reduction activities?**

Method	Comment
Dedicated budget for energy efficiency	Our Energy Management Program (over US \$100M in investments from 2010-2018) aims to reduce our factories' energy consumption and help achieve greenhouse gas emissions reduction targets. In 2018 we achieved a reduction of 36% of our scope 1 and 2 compared to our 2010 baseline and progressing towards our target to reduce 40% and 60% by 2030 and 2040 respectively.
Internal price on carbon	We consider a longer rate of return (4 years or more) for certain energy savings and renewable energy projects. Using a Marginal Abatement Cost Curve (MACC) methodology, we set in 2016 an internal price on carbon of 17 USD per ton of CO2 abated and created a central governance budget for renewable investments.

Dedicated budget for other emissions reduction activities	We have developed a renewable energy strategy with an initial focus on low-carbon electricity uptake in the EU. We commenced the program in 2012 and continued to implement it in more facilities in 2018. We continue to seek new opportunities to purchase greener energy.
Compliance with regulatory requirements/standards	We take the opportunity of regulatory developments to achieve energy/emissions reductions (e.g. Switzerland - carbon tax exemption following a process upgrade) and in particular when investing in new processes (e.g. requirements for renewable energy or energy efficiency) for new or upgraded facilities in Greece and Italy.
Employee engagement	Employee engagement is implemented through our objective setting, Long-Range Planning process and via employee communications, sharing of tools, guidance and best practices. In 2018, the communication team in PMI Operations supported the engagement of all operations employees (more than 40,000 people are working in PMI's operations worldwide) who received senior management briefings on sustainability topics including Climate Change, carbon footprint, renewable energies, etc. Local market EHS managers and Sustainability coordinators run specific focus days and campaigns in all markets where we operate.
Other Dedicated budget to incentivize other emissions reduction initiative in our agricultural supply chain	The examples included in 4.3b are just a few of the Good Agricultural Practices (GAP) activities implemented during 2018. GAP is a broad program with 4 sustainability-related pillars – governance, people, crop and environment – implemented by our leaf suppliers and contracted farmers. It promotes an Integrated Production System which supports farmers in improving yield and farm efficiency on a variety of crops (particularly food crops) and not only tobacco. Through GAP, environmental improvement programs are implemented in all the countries where we source tobacco around the world; these programs include among others: curing barn efficiency improvements; curing fuel switching to greener fuels; eliminating the use of coal; increasing the use of biomass; and helping farmers become wood self-sufficient and seeking traceable sources of sustainable wood.
Dedicated budget for other emissions reduction activities	We have developed a renewable electricity strategy with an initial focus on low-carbon electricity uptake in the EU. We commenced the program in 2012 and continued to implement it in more facilities in 2018. We continue to seek new opportunities to purchase greener energy.



## C4.5

**(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?**

No

## C5. Emissions methodology

### C5.1

**(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).**

#### Scope 1

---

**Base year start**

January 1, 2010

**Base year end**

December 31, 2010

**Base year emissions (metric tons CO<sub>2</sub>e)**

443,186

**Comment**

#### Scope 2 (location-based)

---

**Base year start**

January 1, 2010



**Base year end**

December 31, 2010

**Base year emissions (metric tons CO2e)**

470,864

**Comment**

**Scope 2 (market-based)**

---

**Base year start**

January 1, 2010

**Base year end**

December 31, 2010

**Base year emissions (metric tons CO2e)**

470,864

**Comment**

## **C5.2**

**(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.**

European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for installations  
ISO 14064-1

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)



## C6. Emissions data

### C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO<sub>2</sub>e?

#### Reporting year

---

**Gross global Scope 1 emissions (metric tons CO<sub>2</sub>e)**

408,162

**Start date**

January 1, 2018

**End date**

December 31, 2018

**Comment**

Our scope 1 emissions correspond to manufacturing, offices, warehouses and sales fleet.

### C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

#### Row 1

---

**Scope 2, location-based**

We are reporting a Scope 2, location-based figure

**Scope 2, market-based**

We are reporting a Scope 2, market-based figure



**Comment**

Our scope 2 emissions correspond to manufacturing, offices and warehouses.

**C6.3**

**(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO<sub>2</sub>e?**

**Reporting year**

---

**Scope 2, location-based**

422,337

**Scope 2, market-based (if applicable)**

175,785

**Start date**

January 1, 2018

**End date**

December 31, 2018

**Comment**

**C6.4**

**(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?**

No



## C6.5

### (C6.5) Account for your organization's Scope 3 emissions, disclosing and explaining any exclusions.

#### Purchased goods and services

---

**Evaluation status**

Relevant, calculated

**Metric tonnes CO<sub>2</sub>e**

3,661,107

**Emissions calculation methodology**

Our Value Chain Model and Footprint is calculated to align with the accepted international standard for GHG value chain modelling "Corporate Value Chain (Scope 3) Accounting and Reporting Standard" methodology from WRI.

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

53

**Explanation**

Includes emissions that are product-related (i.e. the materials purchased to make each product) and those emissions non-product-related (i.e. everything else, office stationary, advertising etc.). More than half of this category has been calculated using data received from our suppliers. The rest has been calculated based on material weights sourced or spending and specific emissions factors for each of the materials from international databases like BEIS (DEFRA) or Ecoinvent etc.

#### Capital goods

---

**Evaluation status**

Relevant, calculated

**Metric tonnes CO<sub>2</sub>e**

235,444



**Emissions calculation methodology**

Our Value Chain Model and Footprint is calculated to align with the accepted international standard for GHG value chain modelling "Corporate Value Chain (Scope 3) Accounting and Reporting Standard" methodology from WRI.

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

**Explanation**

Capital goods include emissions from goods that are used to manufacture/distribute PMI's products, or other office buildings and includes for example machinery, buildings or facilities.

**Fuel-and-energy-related activities (not included in Scope 1 or 2)**

---

**Evaluation status**

Relevant, calculated

**Metric tonnes CO2e**

151,500

**Emissions calculation methodology**

Our Value Chain Model and Footprint is calculated to align with the accepted international standard for GHG value chain modelling "Corporate Value Chain (Scope 3) Accounting and Reporting Standard" methodology from WRI.

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

**Explanation**

This category includes the emissions related to the production of fuels and electricity consumed by PMI. i.e. for all fuel-related emissions calculated by PMI as its scope 1&2 emissions, there are associated emissions to extract gas/coal/oil etc., transport and process it before it is combusted, and losses in supplying electricity – these emissions are accounted for in this category.

**Upstream transportation and distribution**

---



**Evaluation status**

Relevant, calculated

**Metric tonnes CO2e**

510,531

**Emissions calculation methodology**

Our Value Chain Model and Footprint is calculated to align with the accepted international standard for GHG value chain modelling "Corporate Value Chain (Scope 3) Accounting and Reporting Standard" methodology from WRI.

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

27

**Explanation**

This category includes emissions from all purchased (non-owned) transport and distribution services. This includes inbound logistics, outbound logistics (i.e. sold products, if PMI has paid for/purchased the service) and transport between PMI facilities.

**Waste generated in operations**

---

**Evaluation status**

Relevant, calculated

**Metric tonnes CO2e**

1,940

**Emissions calculation methodology**

Our Value Chain Model and Footprint is calculated to align with the Corporate Value Chain (Scope 3) Accounting and Reporting Standard methodology from WRI. Our waste flows were broken up into over 50 different waste types and treatment methods. The Technical Guidance for Calculating Scope 3 emissions (GHG Protocol) publish emissions factors for the treatment of each type of waste. We calculated the GHG emissions of each type of waste flow by multiplying the tonnage of each waste flow by its associated emissions factor

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**



0

**Explanation**

This category includes emissions from the third party disposal and treatment of waste generated by PMI's owned or controlled operations.

**Business travel**

---

**Evaluation status**

Relevant, calculated

**Metric tonnes CO2e**

122,967

**Emissions calculation methodology**

Our Value Chain Model and Footprint is calculated to align with the accepted international standard for GHG value chain modelling "Corporate Value Chain (Scope 3) Accounting and Reporting Standard" methodology from WRI.

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

85

**Explanation**

This category includes emissions from the transportation of employees for business-related activities in vehicles owned or operated by third parties. This includes emissions that are caused due to employees travelling by air, road, rail and boat. It also includes the emissions due to stays in hotels.

**Employee commuting**

---

**Evaluation status**

Relevant, calculated

**Metric tonnes CO2e**

45,584



**Emissions calculation methodology**

Our Value Chain Model and Footprint is calculated to align with the accepted international standard for GHG value chain modelling "Corporate Value Chain (Scope 3) Accounting and Reporting Standard" methodology from WRI.

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

**Explanation**

This category includes emissions arising from the transportation of employees between their homes and their worksites. Typically, this may include emissions from: automobile travel, bus travel, rail travel, air travel and other modes including subway, bicycling and walking.

**Upstream leased assets**

---

**Evaluation status**

Not relevant, explanation provided

**Explanation**

This category includes emissions from the operation of assets that are owned by other entities and leased to the reporting company (acting as a lessee), and are not already included in scope 1 and 2.

PMI does lease some warehouse space from third parties with emissions that are not accounted for in scope 1 and 2. However, this warehouse space is included within category 4 – upstream transportation and distribution. The GHG Protocol refers to transportation and distribution, and for PMI the warehouses are part of the distribution network, leading to its reporting combined with transportation. Therefore category 8 has been excluded to avoid double counting.

**Downstream transportation and distribution**

---

**Evaluation status**

Relevant, calculated

**Metric tonnes CO2e**

41,263



**Emissions calculation methodology**

Our Value Chain Model and Footprint is calculated to align with the accepted international standard for GHG value chain modelling "Corporate Value Chain (Scope 3) Accounting and Reporting Standard" methodology from WRI.

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

**Explanation**

This category covers the transport of sold finished goods (FG) to the retailers and end consumers. Transport relating to the end-consumer travelling to the retailer is generally not included under value chain or product footprinting standards.

PMI fleet transportation is included in Scope 1&2 emissions, therefore only non-PMI fleet transport is included in this category. Any transport / storage of sold products paid for by PMI is included in category 4, and excluded from this category.

Therefore, all transport distances input for Category 9 calculations should exclude PMI-owned and operated transport (Scope 1 & 2) and any Third Party (TP) services procured by PMI (Category 4). Some transport legs will have a mixture of two or three of these types of transport services, but Category 9 emissions relate to transport of sold goods paid for by independent external parties only.

**Processing of sold products**

---

**Evaluation status**

Not relevant, explanation provided

**Explanation**

This category includes customer's emissions relating to the processing of intermediate products sold by a reporting company, such as the conversion of aluminum ingots into aluminum injection molded products.

We reviewed this category in 2018 and concluded that PMI sold only final products to end-users, and no intermediate products which could be further processed, transformed or included into other products, therefore this category has been excluded.

**Use of sold products**

---



**Evaluation status**

Relevant, calculated

**Metric tonnes CO2e**

98,230

**Emissions calculation methodology**

Our Value Chain Model and Footprint is calculated to align with the accepted international standard for GHG value chain modelling "Corporate Value Chain (Scope 3) Accounting and Reporting Standard" methodology from WRI.

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

**Explanation**

This category refers to emissions from the use of goods and services sold by PMI to end users, i.e. consumers that use these final products. Emissions from the P1 RRP product are predominantly caused by the electrical charging of the product. This category also includes emissions arising from the use of lighters and matches with conventional cigarettes, OTP and cigars.

**End of life treatment of sold products**

---

**Evaluation status**

Relevant, calculated

**Metric tonnes CO2e**

51,197

**Emissions calculation methodology**

Our Value Chain Model and Footprint is calculated to align with the accepted international standard for GHG value chain modelling "Corporate Value Chain (Scope 3) Accounting and Reporting Standard" methodology from WRI.

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

**Explanation**

This category refers to emissions from the waste disposal and treatment of products sold by PMI at the end of their life (EoL).

**Downstream leased assets**

---

**Evaluation status**

Not relevant, explanation provided

**Explanation**

PMI does lease some office floor-space in certain offices around the world, but this has been confirmed as extremely small, and regarded as de minimis, therefore this category has been excluded.

**Franchises**

---

**Evaluation status**

Not relevant, explanation provided

**Explanation**

Whilst PMI pays other entities to manufacture finished goods (accounted for in category 1a) from materials purchased by PMI (also accounted for in category 1a), as ownership of finished goods always returns back to PMI, there are no examples of franchise operations to account for, therefore this category has been excluded

**Investments**

---

**Evaluation status**

Not relevant, explanation provided

**Explanation**

PMI has no general portfolio investments utilising cash reserves, and all shareholdings in subsidiaries have already been accounted for in scope 1&2 reporting, therefore this category has been excluded.

**Other (upstream)**

---



**Evaluation status**

Not relevant, explanation provided

**Explanation**

There are no other (upstream) emissions at this time.

**Other (downstream)**

---

**Evaluation status**

Not relevant, explanation provided

**Explanation**

There are no other (downstream) emissions at this time.

**C-AC6.6/C-FB6.6/C-PF6.6**

**(C-AC6.6/C-FB6.6/C-PF6.6) Can you break down your Scope 3 emissions by relevant business activity area?**

Yes

**C-AC6.6a/C-FB6.6a/C-PF6.6a**

**(C-AC6.6a/C-FB6.6a/C-PF6.6a) Disclose your Scope 3 emissions for each of your relevant business activity areas.**

---

**Activity**

Agriculture/Forestry

**Scope 3 category**

Purchased goods and services

**Emissions (metric tons CO2e)**



1,581,164

**Please explain**

These emissions include those corresponding to agricultural practices and inputs such as seedling, fertilizers, curing fuels and crop protection agents.

Our carbon footprint is based on actual data (primary data) and average industry data (secondary data), including a number of estimates and assumptions, using impact databases. Elements of our carbon footprint have been modelled using the Life Cycle Assessment (LCA) tool, Simapro. For our carbon footprint emissions we undertook a 3rd party full scope 3 verification against ISO 14040 standards and the GHG Protocol Scope 3 Accounting and Reporting Standard. Due to the new baseline calculations, we have been able to use real data and in cases where no primary data was available extrapolated emissions from international databases such as Ecoinvent have been used.

**Activity**

Distribution

**Scope 3 category**

Upstream transportation and distribution

**Emissions (metric tons CO2e)**

510,531

**Please explain**

These emissions include those corresponding to upstream distribution due to ocean, air and overland transportation plus the warehouse emissions in distribution.

Our carbon footprint is based on actual data (primary data) and average industry data (secondary data), including a number of estimates and assumptions, using impact databases. Elements of our carbon footprint have been modelled using the Life Cycle Assessment (LCA) tool, Simapro. For our carbon footprint emissions we undertook a 3rd party full scope 3 verification against ISO 14040 standards and the GHG



Protocol Scope 3 Accounting and Reporting Standard. Due to the new baseline calculations, we have been able to use real data and in cases where no primary data was available extrapolated emissions from international databases such as Ecoinvent have been used.

---

**Activity**

Distribution

**Scope 3 category**

Downstream transportation and distribution

**Emissions (metric tons CO<sub>2</sub>e)**

41,263

**Please explain**

These emissions include those corresponding to downstream distribution due to in market local distribution.

Our carbon footprint is based on actual data (primary data) and average industry data (secondary data), including a number of estimates and assumptions, using impact databases. Elements of our carbon footprint have been modelled using the Life Cycle Assessment (LCA) tool, Simapro. For our carbon footprint emissions we undertook a 3rd party full scope 3 verification against ISO 14040 standards and the GHG Protocol Scope 3 Accounting and Reporting Standard. Due to the new baseline calculations, we have been able to use real data and in cases where no primary data was available extrapolated emissions from international databases such as Ecoinvent have been used.

---

**Activity**

Consumption

**Scope 3 category**

Use of sold products

**Emissions (metric tons CO<sub>2</sub>e)**

98,230

**Please explain**

This assumes the use of cigarette lighters.

Our carbon footprint is based on actual data (primary data) and average industry data (secondary data), including a number of estimates and assumptions, using impact databases. Elements of our carbon footprint have been modelled using the Life Cycle Assessment (LCA) tool, Simapro. For our carbon footprint emissions we undertook a 3rd party full scope 3 verification against ISO 14040 standards and the GHG Protocol Scope 3 Accounting and Reporting Standard. Due to the new baseline calculations, we have been able to use real data and in cases where no primary data was available extrapolated emissions from international databases such as Ecoinvent have been used.

---

**Activity**

Consumption

**Scope 3 category**

End of life treatment of sold products

**Emissions (metric tons CO<sub>2</sub>e)**

51,197

**Please explain**

Downstream waste treatment and street cleaning related to cigarette butts and waste packaging.

Our carbon footprint is based on actual data (primary data) and average industry data (secondary data), including a number of estimates and assumptions, using impact databases. Elements of our carbon footprint have been modelled using the Life Cycle Assessment (LCA) tool, Simapro. For our carbon footprint emissions we undertook a 3rd party full scope 3 verification against ISO 14040 standards and the GHG Protocol Scope 3 Accounting and Reporting Standard. Due to the new baseline calculations, we have been able to use real data and in cases where no primary data was available extrapolated emissions from international databases such as Ecoinvent have been used.



**Activity**

Agriculture/Forestry

**Scope 3 category**

**Emissions (metric tons CO2e)**

**Please explain**

**C6.7**

**(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?**

Yes

**C6.7a**

**(C6.7a) Provide the emissions from biologically sequestered carbon relevant to your organization in metric tons CO2.**

**Row 1**

---

**Emissions from biologically sequestered carbon (metric tons CO2)**

5,646

**Comment**

In 2018 our direct emissions from biologically sequestered carbon amounted to 5,646 tCO2e. Indirect emissions from biologically sequestered carbon accounting for tobacco curing fuels, tobacco plants and other cigarette direct materials account for 2018 to 4,068,599 tCO2e.



## **C-AC6.8/C-FB6.8/C-PF6.8**

**(C-AC6.8/C-FB6.8/C-PF6.8) Is biogenic carbon pertaining to your direct operations relevant to your current CDP climate change disclosure?**

No

## **C-AC6.9/C-FB6.9/C-PF6.9**

**(C-AC6.9/C-FB6.9/C-PF6.9) Do you collect or calculate greenhouse gas emissions for each commodity reported as significant to your business in C-AC0.7/FB0.7/PF0.7?**

---

### **Agricultural commodities**

Timber

**Do you collect or calculate GHG emissions for this commodity?**

Yes

**Please explain**

We collect and calculate emissions from curing fuels used for tobacco and other direct materials used in our manufacturing process like packaging, cigarette papers, acetate tow for filters, etc.

---

### **Agricultural commodities**

Tobacco

**Do you collect or calculate GHG emissions for this commodity?**

Yes

**Please explain**



These emissions include those corresponding to agricultural practices and inputs such as seeding, fertilizing, curing fuels and crop protection agents and the logistics required to source tobacco from farms to our buying stations and from there to the stemmeries.

### C-AC6.9a/C-FB6.9a/C-PF6.9a

**(C-AC6.9a/C-FB6.9a/C-PF6.9a) Report your greenhouse gas emissions figure(s) for your disclosing commodity(ies), explain your methodology, and include any exclusions.**

#### Timber

---

**Reporting emissions by**

Total

**Emissions (metric tons CO2e)**

1,265,382

**Change from last reporting year**

Lower

**Please explain**

In 2018, 56,380 tCO2e emissions were reduced in our timber based materials supply chain. Our total emissions in the previous year were 1,321,762 tCO2e. We achieved this 4% decrease:  $(58,380/1,320,762)*100$  by engaging with other direct materials suppliers using timber as raw material and inviting them to participate in our CDP supply chain; we collect primary data (e.g. emissions allocated) and collaborate with them to reduce carbon footprint.

#### Tobacco

---

**Reporting emissions by**

Total

**Emissions (metric tons CO2e)**

1,659,343



### Change from last reporting year

Lower

### Please explain

In 2018, we reduced our emissions by 158,539 tCO<sub>2</sub>e in our tobacco supply chain. Our total emissions in the previous year were 1,817,882 tCO<sub>2</sub>e. Therefore, we achieved a 9% decrease:  $(158,539 / 1,817,882) * 100$ .

Total emissions for tobacco include all activities performed and inputs used by third party farmers and related to tobacco seedling production, fertilizers, pesticides, transport and mechanization and curing. Our Global Agricultural Practices (GAP) promotes environmentally sustainable practices, including the elimination of highly hazardous pesticides, the promotion of bio-pesticides and the overall reduction of pesticide use, biodiversity management and reforestation, as well as water, soil, and waste management. A significant percentage of the total GHG emissions attributed to our tobacco purchases come from the curing process of Virginia flue-cured tobacco. Our target is therefore to lower the GHG emission intensity related to this curing process by 70% by 2020, compared to a 2010 baseline. In 2018 we achieved 47% reduction versus 2010. To achieve this target we focus on improving curing barn efficiency and eliminating the use of coal and non-sustainable firewood. In 2018, 170,000 CO<sub>2</sub> tons savings were achieved thanks to combination of 4 factors: increased usage of renewable energies (based on current plans, more than 70% of our flue-cured tobacco purchases should be cured with renewable fuel sources by 2020. In 2018, 46% of the flue-cured tobacco we purchased was cured with renewable fuels - versus 36% in 2017 - of which 33% was cured with sustainable sourced firewood and 13% with biomass); curing barn improvement initiatives and related impact on curing fuel consumption reduction due to efficiency gains; switching to fuels with lower emissions; volume allocation switch to markets with lower emission factors per kilo of cured tobacco. As a result, GHG emissions from curing activities were reduced by over 170,000 tCO<sub>2</sub>e in 2018 versus 2017.

## C6.10

**(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO<sub>2</sub>e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.**

---

### Intensity figure

0.00002

### Metric numerator (Gross global combined Scope 1 and 2 emissions)



583,947

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

29,625,000,000

**Scope 2 figure used**

Market-based

**% change from previous year**

10

**Direction of change**

Decreased

**Reason for change**

The main reason for change is the decrease in absolute CO<sub>2</sub>e emissions by 7.3% from 629,739 tons in 2017 to 583,947 tons in 2018, mainly driven by carbon reduction activities in our manufacturing facilities (such as on-site renewable projects, energy efficiency projects and increased green electricity sourcing) despite a 3.1% increase in net revenues (from US\$28.7 billion in 2017 to US\$29.6 billion in 2018). The intensity number is derived from our 2018 CO<sub>2</sub>e emissions of 583,947 tons divided by net revenues of US\$29.6 billion. The term “net revenues” refers to operating revenues from the sale of our products, excluding excise taxes, and net of sales and promotion incentives. We believe that the most appropriate basis of disclosure is net revenue (as defined) and in line with CDP guidance.

---

**Intensity figure**

7.54

**Metric numerator (Gross global combined Scope 1 and 2 emissions)**

583,947



**Metric denominator**

full time equivalent (FTE) employee

**Metric denominator: Unit total**

77,400

**Scope 2 figure used**

Market-based

**% change from previous year**

3.4

**Direction of change**

Decreased

**Reason for change**

The main reason for this change is the decrease in absolute CO<sub>2</sub>e emissions by 7.3% from 629,739 tons in 2017 to 583,947 tons in 2018, mainly driven by carbon reduction activities in our manufacturing facilities (such as on-site renewable projects, energy efficiency projects and increased green electricity sourcing) and despite a decrease of total number of employees to 77,400. The intensity number is worked out from our 2018 CO<sub>2</sub>e emissions of 583,947 tons divided by 77,400 FTE employees. In 2017 we had 629,739 tons of CO<sub>2</sub>e emissions and 80,600 FTE employees.

---

**Intensity figure**

543

**Metric numerator (Gross global combined Scope 1 and 2 emissions)**

442,419

**Metric denominator**



unit of production

**Metric denominator: Unit total**

815

**Scope 2 figure used**

Market-based

**% change from previous year**

7

**Direction of change**

Decreased

**Reason for change**

This covers Scope 1 and 2 emissions from our manufacturing facilities only. We decrease our CO2 intensity from 584kg CO2 per million cigarettes equivalent sold in 2017 to 543kg CO2 per million cigarettes equivalent sold in 2018. This was driven by our Energy Management Program activities, and renewable energy projects and almost flat production volumes. The intensity number is worked out from our 2018 442,419 CO2e emissions of tons (for manufacturing) divided by 815 billion cigarettes equivalent production volume. In 2017 we had 485,555 tons of CO2e emissions and 831 billion cigarettes equivalent sold.

## C7. Emissions breakdowns

### C7.1

**(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?**

Yes

## C7.1a

**(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).**

Greenhouse gas	Scope 1 emissions (metric tons of CO <sub>2</sub> e)	GWP Reference
CO <sub>2</sub>	406,362	IPCC Fifth Assessment Report (AR5 – 100 year)
CH <sub>4</sub>	536	IPCC Fifth Assessment Report (AR5 – 100 year)
N <sub>2</sub> O	1,264	IPCC Fifth Assessment Report (AR5 – 100 year)

## C7.2

**(C7.2) Break down your total gross global Scope 1 emissions by country/region.**

Country/Region	Scope 1 emissions (metric tons CO <sub>2</sub> e)
Albania	117.33
Algeria	401.97
Argentina	8,747.37
Armenia	165.99
Australia	1,285.18
Bangladesh	87.03
Bosnia and Herzegovina	118.53
Brazil	12,580.85
Bulgaria	242.7
Canada	3,670.86
Chile	57.59

China	116.96
China, Hong Kong Special Administrative Region	165.91
China, Macao Special Administrative Region	0.53
Colombia	2,644.94
Costa Rica	748.43
Croatia	309.5
Czechia	4,903.26
Denmark	129.14
Dominican Republic	994.68
Ecuador	1,111.23
Egypt	1,621.46
El Salvador	311.47
Finland	77.73
France	1,476.02
Georgia	182.97
Germany	21,623.75
Greece	5,717.58
Guatemala	249.91
Hungary	590.95
India	140.93
Indonesia	60,911.31
Italy	29,333.72

Jamaica	47
Japan	4,963.61
Jordan	878.78
Kazakhstan	4,210.39
Kuwait	92.81
Lebanon	107.99
Malaysia	10,938.76
Mexico	12,238.88
Morocco	340.93
Netherlands	34,646.13
Lithuania	1,501.14
New Zealand	205.27
Nicaragua	144.59
Norway	54.48
Pakistan	9,036.39
Panama	52.64
Paraguay	35.24
Peru	132.1
Philippines	35,983.57
Poland	15,509.31
Republic of Korea	5,453.61
Republic of Moldova	99.11

Réunion	91.91
Romania	5,574.5
Russian Federation	37,949.5
Senegal	1,079.56
Serbia	5,463.34
Singapore	457.96
Slovakia	453.58
Slovenia	115.96
South Africa	2,361.5
Spain	1,149.46
Sweden	227.91
Switzerland	3,952.98
Taiwan, Greater China	271.83
Republic of Macedonia	98.61
Thailand	1,539.04
Tunisia	156
Turkey	27,831.63
Ukraine	8,759.41
United Arab Emirates	650.73
United Kingdom of Great Britain and Northern Ireland	628.49
United Republic of Tanzania	33.83
Uruguay	30.7

Venezuela (Bolivarian Republic of)	89.43
Viet Nam	355.92
Other, please specify Rest of the World	4,292.92
Israel	976.91
Portugal	5,881.67
Nigeria	175.84

### C7.3

**(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.**

By activity

#### C7.3c

**(C7.3c) Break down your total gross global Scope 1 emissions by business activity.**

Activity	Scope 1 emissions (metric tons CO <sub>2</sub> e)
Manufacturing	292,662
Offices and Warehouses	563
Vehicle Fleet	110,878
Private Aircraft	4,059

### C-AC7.4/C-FB7.4/C-PF7.4

**(C-AC7.4/C-FB7.4/C-PF7.4) Do you include emissions pertaining to your business activity(ies) in your direct operations as part of your global gross Scope 1 figure?**

Yes



## C-AC7.4b/C-FB7.4b/C-PF7.4b

**(C-AC7.4b/C-FB7.4b/C-PF7.4b) Report the Scope 1 emissions pertaining to your business activity(ies) and explain any exclusions. If applicable, disaggregate your agricultural/forestry by GHG emissions category.**

---

**Activity**

Processing/Manufacturing

**Emissions (metric tons CO2e)**

292,662

**Methodology**

Default emissions factor

**Please explain**

---

**Activity**

Distribution

**Emissions (metric tons CO2e)**

115,500

**Methodology**

Default emissions factor

**Please explain**

## C7.5

### (C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Argentina	13,366.21	9,974.11	35,463.54	9,000
Brazil	2,256.52	2,256.52	18,757.46	0
Canada	2,690.82	695.62	17,891.11	13,266
Colombia	1,696.98	109.59	7,668.22	7,173.02
Costa Rica	3.26	3.26	271.98	0
Czechia	13,833.3	136.96	25,978.04	25,720.83
Dominican Republic	217.52	217.52	362.17	0
Ecuador	464.48	464.48	1,651.78	0
Germany	27,593.57	415.46	64,756.04	60,530.33
Greece	10,451.66	0	20,050.6	20,050.6
Indonesia	63,886.6	63,886.6	88,157	904.06
Italy	26,317.27	362.09	79,645.48	78,554.83
Jordan	2,317.43	2,317.43	4,659.09	0
Kazakhstan	5,325.25	5,325.25	10,507.6	0
Malaysia	7,259.83	7,259.83	11,041.57	0
Mexico	12,377.02	781.35	26,571.54	24,894.11
Pakistan	2,496.42	2,496.42	6,911.25	557.41

Philippines	40,419.56	1,278.52	66,305.05	64,207.73
Poland	49,093.99	3,294.11	75,700.51	63,329.48
Portugal	6,674.49	0	23,135.14	23,135.14
Romania	5,506.48	0	17,106.18	17,106.18
Russian Federation	27,496.69	27,496.69	78,264.32	0
Senegal	2,774.61	2,774.61	4,131.34	0
Serbia	15,421.44	104.63	21,121.44	20,907.46
South Africa	3,014.64	3,014.64	3,173.31	0
Republic of Korea	11,055.23	11,055.23	21,117.91	0
Switzerland	544.57	0	19,224.9	19,296.08
Turkey	14,166.69	1,315.54	30,605.92	27,783.48
Ukraine	12,086.11	12,086.11	28,464.71	0
Venezuela (Bolivarian Republic of)	1,507.29	1,507.29	4,995.98	0
Other, please specify Rest of the World	11,896.25	11,625.87	27,425.23	0
Lithuania	3,585.22	0	25,572.21	25,572.21
Netherlands	21,128.89	118.94	45,321.52	45,066.38
Australia	364.47	364.47	478.38	0
Egypt	80.73	80.73	175.38	0
France	10.83	10.83	205.86	0
Japan	419.46	419.46	768.38	0
Lebanon	102.08	102.08	144	0

Norway	0.25	0.25	31.69	0
Spain	16.5	16.5	66.76	0
Thailand	111.77	111.77	231.6	0
United Arab Emirates	2,226.95	2,226.95	3,366.52	0
United Kingdom of Great Britain and Northern Ireland	77.53	77.53	309.31	0

## C7.6

**(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.**

By activity

### C7.6c

**(C7.6c) Break down your total gross global Scope 2 emissions by business activity.**

Activity	Scope 2, location-based emissions (metric tons CO <sub>2</sub> e)	Scope 2, market-based emissions (metric tons CO <sub>2</sub> e)
Manufacturing	395,371	149,757
Offices and Warehouses	26,966	26,028

## C7.9

**(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?**

Decreased

## C7.9a

**(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year.**

	Change in emissions (metric tons CO <sub>2</sub> e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	43,596	Decreased	6.9	In 2018, 43,596 tCO <sub>2</sub> e of Scope 1 and 2 emissions were reduced by our renewable energy consumption. Our total Scope 1 and 2 emissions in the previous year were 629,739tCO <sub>2</sub> e. Therefore, we arrived at a 6.9% decrease: $(43,596/629,739)*100 = 6.9$ .
Other emissions reduction activities	11,139	Decreased	1.8	In 2018, 11139 tCO <sub>2</sub> e of Scope 1 and 2 emissions were reduced by our emissions reduction activities. Our total Scope 1 and 2 emissions in the previous year were 629,739 tCO <sub>2</sub> e. Therefore, we achieved a 1.8% decrease: $(11139/629,739)*100 = 1.8$ %. We had an overall decrease in our absolute CO <sub>2</sub> emissions (from 629,739 tons in 2017 to 583,947 tons in 2018 i.e. a total of 45,739 tons saved or 7.3%) driven by 1.8% decrease from emission reduction initiatives, the 6.9% decrease due to renewable energy consumption, 1.4% decrease due to change in production output volumes. The main emission reduction activities led to 31% reduction in Scope 2 manufacturing emissions (driven by additional renewable energy uptake with 43,596 tons saved) and 9% increase in Scope 1 manufacturing emissions (driven by new trigeneration plants and production increase of our new smoke free products, which require higher amounts of energy to produce) partially compensated by switch to greener fuels and increases in energy efficiency.
Divestment	0	No change	0	PMI did not have any changes due to change in divestments in 2018.
Acquisitions	0	No change	0	PMI did not have any changes due to change in acquisitions in 2018.
Mergers	0	No change	0	PMI did not have any changes due to change in mergers in 2018.

Change in output	8,942	Increased	1.4	In 2018, 8942 tCO <sub>2</sub> e of Scope 1 and 2 were increased in output. Our total Scope 1 and 2 emissions in the previous year were 629,739 tCO <sub>2</sub> e. Therefore, we achieved a 1.4% increase: $(8942/629,739)*100=1.4\%$ . The main drivers for this increase was the ramp up in the production of smoke free products which require 3 times more energy on average than our conventional cigarettes, compensated partially by a slight decrease in production volume and kilometers driven by our vehicle fleet in 2018.
Change in methodology	0	No change	0	PMI did not have any changes due to change in methodology in 2018.
Change in boundary	0	No change	0	PMI did not have any changes due to change in boundary in 2018.
Change in physical operating conditions	0	No change	0	PMI did not have any changes due to change in physical operating conditions in 2018.
Unidentified	0	No change	0	PMI did not have any changes due to change in unidentified in 2018.
Other	0	No change	0	PMI did not have any changes due to change in other in 2018.

## C7.9b

**(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?**

Market-based

## C8. Energy

### C8.1

**(C8.1) What percentage of your total operational spend in the reporting year was on energy?**

More than 0% but less than or equal to 5%

## C8.2

**(C8.2) Select which energy-related activities your organization has undertaken.**

	Indicate whether your organization undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

## C8.2a

**(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.**

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	16,990	1,663,339	1,680,329
Consumption of purchased or acquired electricity		544,844	352,761	897,605
Consumption of purchased or acquired heat		0	17,971	17,971
Consumption of self-generated non-fuel renewable energy		2,211		2,211
Total energy consumption		564,045	2,034,071	2,598,116



## C8.2b

**(C8.2b) Select the applications of your organization’s consumption of fuel.**

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

## C8.2c

**(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.**

---

**Fuels (excluding feedstocks)**

Jet Kerosene

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

15,565

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

0

**MWh fuel consumed for self-cogeneration or self-trigeneration**

0

**Comment**

---

**Fuels (excluding feedstocks)**

Biogasoline

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

3,166

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

0

**MWh fuel consumed for self-cogeneration or self-trigeneration**

0

**Comment**



---

**Fuels (excluding feedstocks)**

Brown Coal Briquettes (BKB)

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

28,487

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

28,487

**MWh fuel consumed for self-cogeneration or self-trigeneration**

0

**Comment**

---

**Fuels (excluding feedstocks)**

Diesel



**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

219,460

**MWh fuel consumed for self-generation of electricity**

38,785

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

0

**MWh fuel consumed for self-cogeneration or self-trigeneration**

0

**Comment**

---

**Fuels (excluding feedstocks)**

Fuel Oil Number 4

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

40,997

**MWh fuel consumed for self-generation of electricity**



0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

40,997

**MWh fuel consumed for self-cogeneration or self-trigeneration**

0

**Comment**

---

**Fuels (excluding feedstocks)**

Motor Gasoline

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

244,747

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

0



**MWh fuel consumed for self-cogeneration or self-trigeneration**

0

**Comment**

---

**Fuels (excluding feedstocks)**

Natural Gas

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

1,089,185

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

220,189

**MWh fuel consumed for self-generation of steam**

660,566

**MWh fuel consumed for self-cogeneration or self-trigeneration**

208,430

**Comment**



**Fuels (excluding feedstocks)**

Coal

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

2,850

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

2,850

**MWh fuel consumed for self-cogeneration or self-trigeneration**

0

**Comment**

---

**Fuels (excluding feedstocks)**

Liquefied Petroleum Gas (LPG)

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**



22,048

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

0

**MWh fuel consumed for self-cogeneration or self-trigeneration**

0

**Comment**

---

**Fuels (excluding feedstocks)**

Wood Chips

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

13,823

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0



**MWh fuel consumed for self-generation of steam**

13,823

**MWh fuel consumed for self-cogeneration or self-trigeneration**

0

**Comment**

## C8.2d

(C8.2d) List the average emission factors of the fuels reported in C8.2c.

### Biogasoline

---

**Emission factor**

0.0089

**Unit**

kg CO2e per liter

**Emission factor source**

Emission factor provided by UK Government (DEFRA)

**Comment**

### Brown Coal Briquettes (BKB)

---

**Emission factor**

90.97

**Unit**



kg CO2e per GJ

**Emission factor source**

Emission factor provided by UK Government (DEFRA)

**Comment**

**Coal**

---

**Emission factor**

94.98

**Unit**

kg CO2 per GJ

**Emission factor source**

Emission factor provided by UK Government (DEFRA)

**Comment**

**Diesel**

---

**Emission factor**

2.69

**Unit**

kg CO2e per liter

**Emission factor source**

Emission factor provided by UK Government (DEFRA)



**Comment**

**Fuel Oil Number 4**

---

**Emission factor**

79.29

**Unit**

kg CO2e per GJ

**Emission factor source**

Emission factor provided by UK Government (DEFRA)

**Comment**

**Jet Kerosene**

---

**Emission factor**

2.54

**Unit**

kg CO2 per liter

**Emission factor source**

Emission factor provided by UK Government (DEFRA)

**Comment**

**Liquefied Petroleum Gas (LPG)**

---



**Emission factor**

63.97

**Unit**

kg CO2e per GJ

**Emission factor source**

Emission factor provided by UK Government (DEFRA)

**Comment**

**Motor Gasoline**

---

**Emission factor**

2.31

**Unit**

kg CO2e per liter

**Emission factor source**

Emission factor provided by UK Government (DEFRA)

**Comment**

**Natural Gas**

---

**Emission factor**

56.77

**Unit**

kg CO2e per GJ



**Emission factor source**

Emission factor provided by UK Government (DEFRA)

**Comment**

**Wood Chips**

**Emission factor**

4.18

**Unit**

kg CO2e per GJ

**Emission factor source**

Emission factor provided by UK Government (DEFRA)

**Comment**

**C8.2e**

**(C8.2e) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.**

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	88,766	88,766	4,060	4,060
Heat	187,463	187,463	302	302
Steam	634,715	634,715	11,750	11,750
Cooling	575,883	575,883	350,115	350,115

## C8.2f

**(C8.2f) Provide details on the electricity, heat, steam and/or cooling amounts that were accounted for at a low-carbon emission factor in the market-based Scope 2 figure reported in C6.3.**

---

**Basis for applying a low-carbon emission factor**

Energy attribute certificates, Guarantees of Origin

**Low-carbon technology type**

Solar PV

Wind

Hydropower

Biomass (including biogas)

**Region of consumption of low-carbon electricity, heat, steam or cooling**

Europe

**MWh consumed associated with low-carbon electricity, heat, steam or cooling**

329,865

**Emission factor (in units of metric tons CO<sub>2</sub>e per MWh)**

0

**Comment**

Renewable energy (certified green electricity) procurement for the majority of our EU facilities commenced in 2014, certificates available for 2018

---

**Basis for applying a low-carbon emission factor**



Energy attribute certificates, I-RECs

**Low-carbon technology type**

- Solar PV
- Wind
- Hydropower
- Biomass (including biogas)

**Region of consumption of low-carbon electricity, heat, steam or cooling**

- Other, please specify
  - Latin America and Asia Pacific

**MWh consumed associated with low-carbon electricity, heat, steam or cooling**

132,847

**Emission factor (in units of metric tons CO<sub>2</sub>e per MWh)**

0

**Comment**

Renewable energy (certified green electricity) procurement outside of EU, certificates available for 2018

---

**Basis for applying a low-carbon emission factor**

Contract with suppliers or utilities (e.g. green tariff), not supported by energy attribute certificates

**Low-carbon technology type**

- Solar PV
- Wind
- Hydropower
- Biomass (including biogas)

**Region of consumption of low-carbon electricity, heat, steam or cooling**



Other, please specify  
Europe and Canada

**MWh consumed associated with low-carbon electricity, heat, steam or cooling**

82,133

**Emission factor (in units of metric tons CO<sub>2</sub>e per MWh)**

0

**Comment**

Renewable energy procurement that are covered by direct green contracts with utilities based on national schemes mostly. (i.e. no GOs, RECs or i-RECs)

## C9. Additional metrics

### C9.1

**(C9.1) Provide any additional climate-related metrics relevant to your business.**

---

**Description**

Waste

**Metric value**

4.4

**Metric numerator**

Waste landfilled or incineration w/o heat recovery

**Metric denominator (intensity metric only)**



Total waste generated

**% change from previous year**

32

**Direction of change**

Decreased

**Please explain**

The start up of our new RRP facilities in Italy, impacted our disposal ratio in 2017. In 2018 we solved this issue and we are back on track to maintain our long-term target to reduce our disposal ratio below 5%.

## C10. Verification

### C10.1

**(C10.1) Indicate the verification/assurance status that applies to your reported emissions.**

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

### C10.1a

**(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 and/or Scope 2 emissions and attach the relevant statements.**



**Scope**

Scope 1

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Reasonable assurance

**Attach the statement**

 PMI 2018 scope 1 and 2 statement External.pdf

**Page/ section reference**

Page 3: total Scope 1

Page 2 and 3: method and scope

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

---

**Scope**

Scope 2 location-based



**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Reasonable assurance

**Attach the statement**

 PMI 2018 scope 1 and 2 statement External.pdf

**Page/ section reference**

Page 3: total Scope 2 location-based.

Page 2 and 3: method and scope.

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

---

**Scope**

Scope 2 market-based

**Verification or assurance cycle in place**

Annual process



**Status in the current reporting year**

Complete

**Type of verification or assurance**

Reasonable assurance

**Attach the statement**

 PMI 2018 scope 1 and 2 statement External.pdf

**Page/ section reference**

Page 3: total Scope 2 market-based.

Page 2 and 3: method and scope.

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

## C10.1b

**(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.**

---

**Scope**

Scope 3- all relevant categories

**Verification or assurance cycle in place**



Annual process

**Status in the current reporting year**

Complete

**Attach the statement**

 PMI scope 3 statement\_.pdf

**Page/section reference**

Page 1: total Scope 3

Page 2 and 3: method and scope.

This is the first year we do a full 100% validation of our scope 3 emission footprint.

**Relevant standard**

ISO14064-3

**C10.2**

**(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?**

Yes

**C10.2a**

**(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?**

Disclosure module verification relates to	Data verified	Verification standard	Please explain
---	---------------	-----------------------	----------------



C6. Emissions data	Year on year change in emissions (Scope 1 and 2)	ISO14064-3	PMI has chosen to verify this data in order to certify our year on year progress on carbon emission reductions in all our operations (factories, offices, warehouses and fleet).
C6. Emissions data	Year on year change in emissions (Scope 3)	ISO14064-3	PMI has chosen to verify this data from our carbon footprint model in order to certify our year on year progress on carbon emission reductions in all our operations (factories, offices, warehouses and fleet) and supply chain.

## C11. Carbon pricing

### C11.1

**(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?**

Yes

#### C11.1a

**(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.**

EU ETS

Switzerland ETS

#### C11.1b

**(C11.1b) Complete the following table for each of the emissions trading systems in which you participate.**

**EU ETS**

**% of Scope 1 emissions covered by the ETS**

19



**Period start date**

January 1, 2018

**Period end date**

December 31, 2018

**Allowances allocated**

60,354

**Allowances purchased**

44,598

**Verified emissions in metric tons CO2e**

39,388

**Details of ownership**

Facilities we own and operate

**Comment**

**Switzerland ETS**

---

**% of Scope 1 emissions covered by the ETS**

1

**Period start date**

January 1, 2018

**Period end date**

March 12, 2018

**Allowances allocated**



6,417

**Allowances purchased**

0

**Verified emissions in metric tons CO2e**

5,276

**Details of ownership**

Facilities we own and operate

**Comment**

## C11.1d

### **(C11.1d) What is your strategy for complying with the systems in which you participate or anticipate participating?**

European Union Allowances (EUA)'s prices have shown in 2018 a strong up-moving trend. The main reason behind this uptrend is an expectation of an unbalanced market on the demand side mainly due to the activity of the EU ETS system to reduce the oversupply number of credits in the market and thus low prices in the past.

In order to mitigate this impact reducing energy consumption through increasing energy efficiency in our factories is a priority. At PMI, we started in 2012 our Global Energy Management Program paired with local reduction initiatives, targeting energy and CO2 savings to minimize the need for purchasing EUAs. We balance our allowances purchased over a 3 year timeframe. As a result of the efforts, energy reductions have enabled our factories in Portugal, Germany and Lithuania to be removed from the EU ETS scheme in the last 3 years (moving below total combustion capacity thresholds).

We will likely on board new sites into EU ETS during 2019 due to the increased energy requirements of our smoke-free products.

## C11.2

**(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?**

No

## C11.3

**(C11.3) Does your organization use an internal price on carbon?**

Yes

## C11.3a

**(C11.3a) Provide details of how your organization uses an internal price on carbon.**

---

### **Objective for implementing an internal carbon price**

Change internal behavior

Drive low-carbon investment

Identify and seize low-carbon opportunities

### **GHG Scope**

Scope 1

Scope 2

Scope 3

### **Application**

In 2016, a Marginal Abatement Cost Curve (MACC) tool was developed with the company DuPont Sustainable Solutions and an assessment within PMI was performed collecting more than 70 carbon reduction initiatives in our operations footprint. As a result a carbon price was set at 17 USD per ton of CO<sub>2</sub>.

The internal carbon price is included in every investment that has potential impact on the environment as an attachment to the business plan. This carbon price improves the return on investment (ROI) on those initiatives that use cleaner technologies and disincentive those initiatives that increase our carbon footprint.

Using an internal carbon price in our company is helping to raise awareness around environmental impacts. As an example of carbon price usage, in 2018 we built a solar photovoltaic energy generation in Philippines and a Biomass plant in Mexico using internal carbon price and the MACC tool as main decision criteria.

**Actual price(s) used (Currency /metric ton)**

17

**Variance of price(s) used**

Uniform pricing: single price applied throughout the company that is updated every 1-2 years to reflect the upcoming opportunities for carbon reduction in our operations.

**Type of internal carbon price**

Shadow price  
Internal fee

**Impact & implication**

As an example of carbon price usage, in 2018 we implemented a 2.5MW power solar photovoltaic plant in one of our facilities in the Philippines, started the construction of another 2 PV plants, and built 2 biomass boilers in Mexico with +10MUSD budgeted using internal carbon price and the MACC tool as main decision criteria.

Our current challenge is how to better select projects based on their reduced impact on the environment, while having long ROI. We include in the financial calculations the 17 USD internal carbon price and estimate ROI with this internal carbon price factored in. We apply a financial threshold of 100kUSD as a criteria for the project selection, combined with our in-house expertise.

Embedding an internal carbon price in the financial decision, supports raising awareness to invest in environmentally friendly and low carbon technologies.

## C12. Engagement

### C12.1

#### (C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, our customers

Yes, other partners in the value chain

### C12.1a

#### (C12.1a) Provide details of your climate-related supplier engagement strategy.

---

##### Type of engagement

Engagement & incentivization (changing supplier behavior)

##### Details of engagement

Run an engagement campaign to educate suppliers about climate change

##### % of suppliers by number

91

##### % total procurement spend (direct and indirect)

34

##### % Scope 3 emissions as reported in C6.5

86

##### Rationale for the coverage of your engagement



Suppliers' engagement covers all tobacco supply chain including 350,000 tobacco farmers and leaf suppliers, direct material suppliers (around 70% of Direct Materials total spend), and the majority of our main electronics and logistics services providers. We have used our carbon footprint model to identify the main climate change impacts of our purchased material categories. For direct materials (non-tobacco), we have identified acetate tow and consumer board and paper as significant contributors to our carbon footprint and we have therefore prioritized engagement with them. Since 2014 we have engaged with them through direct discussions and through CDP Supply Chain program. We have invited suppliers of tobacco, paper/board, acetate tow, distribution/logistics, electronics and some others to share primary data with us to improve the accuracy of our carbon footprint model in 2018. In the medium term, we will use this forum to drive decreases in our value chain emissions and reduce our emissions intensity by 30% by 2020.

Main engagement areas:

- Tobacco leaf suppliers – through Good Agricultural Practices (GAP) program which includes mandatory requirements for managing energy and climate change (mitigation and adaptation). Implementation of GAP leads to the identification of key areas for improvement where we put initiatives in place in collaboration with our tobacco suppliers. We also focus on improving tobacco curing process that, according to our carbon footprint studies, is the largest source of GHG emissions in our tobacco supply chain.
- All other non-leaf suppliers – in 2017, we released our Responsible Sourcing Principles (RSP) and Implementation Guidelines, which encourages our suppliers to minimize their energy use and GHG emissions. The RSP applies to all suppliers doing business with PMI. We aim to influence their behavior through procurement and product development activities. One of the outcome of their behavior change is the definition of parameters of environmental performance for different raw material components.
- Equipment manufacturers – through an industry colloquium which helps target energy efficiency developments for our manufacturing equipment. Through engagement and information exchange we aim to increase the proportion of primary data to calculate our carbon footprint.

### **Impact of engagement, including measures of success**

Our measure of success is to achieve at least 80% response rate in the CDP supply chain program. In 2018 the outcome of this engagement was a 100% response rate, which contributed to PMI's achieving a CDP Supply Chain A rating. The information received from CDP supply chain program has been used to fine tune our carbon footprint model in 2018. Different one-on-one meetings have occurred with direct materials and logistics suppliers like acetate tow, paper or ocean logistics, and collaboration is ongoing to reduce emissions. Our tobacco leaf suppliers are contractually required to implement our Good Agricultural Practices (GAP) program. To assess suppliers' conformity against GAP, the Sustainable Tobacco Program (STP) is used; it includes an annual supplier's self-assessment and on-site reviews performed by AB Sustain, an independent company. As part of the on-site review, AB Sustain looks for metrics and performance on reducing water and GHG emissions, eliminating hazardous pesticides, using of bio-pesticides, reforestation, soil and waste management. . We expect our leaf suppliers to



demonstrate continuous improvements year on year, this is our measure of success based on the assessed scores.- Results of these assessments are included in our supplier scorecards and used to make future decisions such as tobacco purchase volume allocation through our supplier base. GAP is also the foundation of our goal to increase resilience of tobacco crops to climate change. We also have a measure of success to reduce the GHG emission intensity related to tobacco curing by 70% by 2020, compared to a 2010 baseline. We are well on track with a 47% reduction achieved in 8 years (2010-2018). A monitoring and verification framework has been launched in 2017 across our leaf supply chain to monitor and verify the impact of the more than 40 initiatives being implemented. These initiatives support the achievement of our 70% carbon footprint reduction goal by 2020 by eliminating the use of coal and non-sustainable firewood, promoting the use of alternative biomass fuels and improving curing efficiency. For equipment manufacturers, we expect primary data to cover at least 80% of our value chain emissions for our LCA by 2020.

**Comment**

---

**Type of engagement**

Engagement & incentivization (changing supplier behavior)

**Details of engagement**

Other, please specify

Financial support to change behavior

**% of suppliers by number**

100

**% total procurement spend (direct and indirect)**

100

**% Scope 3 emissions as reported in C6.5**

32

**Rationale for the coverage of your engagement**



As most our emissions occur in our supply chain, we engage with tobacco suppliers and farmers to reduce the environmental impacts from tobacco growing and curing, which is a priority area in our upstream value chain. Additionally tobacco suppliers are crucial to our business and highly impacted by climate and water related risks. Through the implementation of our Good Agricultural Practices (GAP), a contractually required program for all our tobacco suppliers, several topics are covered, including GHG emission reductions. Our GAP program has 4 pillars that allows us to address the impact of tobacco farming on the environment, the profitability and sustainability of the crop and the working conditions on farms. GAP enables PMI to help farmers minimize negative impacts on the environment by an appropriate usage of the natural resources such as water and energy; conserving ecosystems and biodiversity; ensuring soil fertility in the long term; and managing waste properly.

**Impact of engagement, including measures of success**

Our Good Agricultural Practices (GAP) program applies to farmers contracting with PMI and our tobacco suppliers, and to 95% of the procurement spend for tobacco leaf. To assess suppliers' conformity against GAP, the Sustainable Tobacco Program (STP) is used; it includes an annual supplier's self-assessment and on-site reviews performed by AB Sustain, an independent company. As part of the on-site review, AB Sustain looks for metrics and performance on reducing water and GHG emissions, eliminating hazardous pesticides, using of bio-pesticides, reforestation, soil and waste management. . We expect our leaf suppliers to demonstrate continuous improvements year on year, this is our measure of success based on the assessed scores.- Results of these assessments are included in our supplier scorecards and used to make future decisions such as tobacco purchase volume allocation through our supplier base. GAP is also the foundation of our goal to improve resilience of tobacco crops to climate change. We also have a measure of success to reduce the GHG emission intensity related to tobacco curing by 70% by 2020 compared to a 2010 baseline. We are well on track with a 47% reduction achieved between 2010 and 2018. In 2017, a monitoring, verification and reporting framework has been launched across our leaf supply chain to monitor and verify the impact of the more than 40 initiatives being implemented. These initiatives support the achievement of our 70% carbon footprint reduction goal by 2020 by eliminating the use of coal and non-sustainable firewood, promoting the use of alternative biomass fuels and improving curing efficiency.

**Comment**

---

**Type of engagement**

Compliance & onboarding



**Details of engagement**

Included climate change in supplier selection / management mechanism

**% of suppliers by number**

92

**% total procurement spend (direct and indirect)**

77

**% Scope 3 emissions as reported in C6.5**

86

**Rationale for the coverage of your engagement**

PMI's approach to sustainable supply chain includes managing our suppliers and set clear expectations by engaging with them.

In 2017, we launched our Responsible Sourcing Principles (RSP) and Implementation Guidelines, which established the foundation for a more comprehensive and systematic approach to addressing supply chain sustainability beyond our agricultural supply chain. The RSP is available in 27 languages and covers environmental, social, and governance topics. In the area of climate change, our RSP encourages suppliers review, identify and minimize their environmental impacts, especially regarding land use, waste, emissions, energy and water consumption. We engage with suppliers on the need, over time, to align their business practices with our RSP. The RSP applies to all suppliers and service providers, including our tobacco suppliers. The prioritization for direct engagement is based on our spend and the suppliers having the biggest potential environmental impacts through their business activities. In our direct materials (non-tobacco) supply chain we identified acetate tow, consumer board and paper as significant contributors to our carbon footprint and we have therefore prioritized engagement with them. We have additional specific requirements in our agricultural supply chain through our Good Agricultural Practices (GAP). The implementation of GAP and strategic initiatives to reduce carbon footprint in our supply chain such as upgrading tobacco barns to increase curing efficiency or replacing fossil fuels with biomass as curing fuel sources requires a collaboration with PMI Leaf suppliers; this close collaboration is an opportunity to strengthen our working relationship, and foster further collaboration not only to address climate change related risks, but also in other areas that may have a positive impact on our business and create value to society. This is an opportunity for PMI to build a stronger and more resilient value chain and to position the company as a leading company in sustainability by collaborating with its leaf suppliers to implement actions that contribute to a more sustainable future.

**Impact of engagement, including measures of success**



A major focus in 2018 was on delivering training and workshops for PMI procurement teams as part of the capacity-building process with suppliers, including conducting Responsible Sourcing Principles (RSP) workshops to reach one-hundred senior procurement leaders. Furthermore we increased understanding and transparency of the practices adopted by our tier 1 electronics suppliers, covering 100% of them, through audits and development of corrective action plans of our EMS (Electronics Manufacturing Services) suppliers; and, we completed the risk mapping of 16 tier 2 electronics suppliers through on-site visits covering environmental risks. We have developed a supplier due diligence framework, followed by selection and engagement of a partner to develop a tailored due diligence platform and services to monitor and drive improvements in key supplier categories. The project implementation started in January 2019 with the first group of prioritized suppliers. In addition, we worked with a consultant to carry out a study to collect and analyze primary data from our main direct materials, electronics and logistics suppliers in order to develop a strategy for reducing carbon footprint of our key direct materials (e.g. acetate tow, paper and board, PLA, etc.). This will contribute to our ambitious 2030 Science Based Target to reduce our absolute emissions by 40% and to our 30% intensity emissions reduction by 2020 across our value chain vs. a 2010 baseline.

**Comment**

**C12.1b**

**(C12.1b) Give details of your climate-related engagement strategy with your customers.**

---

**Type of engagement**

Collaboration & innovation

**Details of engagement**

Run a campaign to encourage innovation to reduce climate change impacts

**% of customers by number**

100

**% Scope 3 emissions as reported in C6.5**

7



**Please explain the rationale for selecting this group of customers and scope of engagement**

All of our customers expect us to anticipate their needs and meet their expectations. Due to increasing awareness and interest in environmental issues, we expect the product selection and buying decision of our customers to be influenced by our environmental performance and thus the development and commercialization of innovative products with lower environmental impacts. In addition, our customers' insights research helps us understand the potential market for eco-product developments.

Our strategic business transformation towards a smoke-free future, replacing conventional cigarettes with Reduced Risk Products (RRPs), initiated fundamental changes in our operating model, organizational structure and culture and accelerated our evolution to a consumer-centric, technology and science-driven company. LCA is integrated in our R&D processes, resulting in the development of LCAs for RRPs to assess the potential impacts these new products may have on our carbon footprint. The increasing relevance of RRPs within our product portfolio, will enhance focus on these product's eco-design and their potential environmental impacts, with additional steps to our product development process to mitigate those impacts. As part of our business transformation we strive to continuously share our efforts on sustainability and climate-change related issues, engaging with all our stakeholders, including customers, by means of our annual sustainability report, communication campaigns and our CDP disclosures, demonstrating our achievements related, for instance, to our Science Based Emission Reduction Targets. By means of our global corporate communication campaign "UNSMOKE", PMI engages with its customers worldwide to reinforce the message that quitting cigarettes and nicotine altogether is the best choice; to support adult smokers who don't quit to learn about better, smoke-free alternatives; and to foster and spark innovation and consumer choice. As the engagement progresses, we continue to recognize that the best choice is to quit smoking altogether, or to switch to smoke-free alternatives, complementing our actions towards mitigating our products' climate-change related impacts.

**Impact of engagement, including measures of success**

We will measure the impact of our engagement and our success through direct feedback from our customers, analyses of growing demand for our RRPs and the progress against our Science Based Targets (Scope 1, 2 and 3). Currently our RRPs have around 11 million regular users. With the increasing demand for smoke-free products, eco-design and our product's LCAs will drive innovation and improvements across our value chain. These improvements result also in CO2 emission reductions, contributing to the achievement of our Science Based Target of 40% CO2e absolute reduction by 2030 against our 2010 baseline (Scope 1, 2 and 3). We plan to continuously monitor progress and future impacts of our engagement with customers to enable us to understand trends in their preferences and maintain focus on the achievement of emerging environmental targets meaningful for them.

## C12.1c

### **(C12.1c) Give details of your climate-related engagement strategy with other partners in the value chain.**

In our value chain we engage with our employees and local automobile associations through a two-folded strategy that focuses on training initiatives and continuously renewing our fleet to more eco-friendly vehicles. As a result of our engagement with local automobile associations in some countries where we operate, eco-driving trainings are regularly conducted to promote more environmental-friendly practices by our drivers, resulting for example in fuel savings, and consequently reduction in carbon emissions, and in minimizing noise and air pollutions at local level. In Germany, yearly eco-driving trainings are organized in cooperation with local automobile associations and other partners to support our sustainability and climate-change related efforts in fleet.

Furthermore every year most PMI affiliates perform voluntary awareness and promotion campaigns programs in order to increase employees' active participation in environmental programs and to make carbon footprint reduction part of the company's culture. Awards and recognition of our employees for best practices are a core element of such campaigns. Examples of these awarded campaigns include CO<sub>2</sub> emission reduction tips as part of the annual eco-week in Turkey including a race with zero CO<sub>2</sub> emission slot cars and the sales fleet replacement in Spain from diesel to hybrid cars with the direct participation of the employees in the selection of the models (all drivers voted).

PMI has a fleet of around 25,000 vehicles used for delivery, sales, and other services, out of which approximately 400 are "green" vehicles, either electric, hybrid or emitting less than 80 g/km of CO<sub>2</sub> for cars or vans and less than 600 g/km of CO<sub>2</sub> for trucks. Our fleet emissions account for about 28% of our direct (scope 1) GHG emissions. In 2018, we decreased the absolute CO<sub>2</sub>e emissions from our fleet by 4% versus 2017. This reduction is a combination of good vehicle maintenance, ongoing switch to hybrid and more fuel-efficient vehicles, and eco-driving behavior in our fleet.

## C-AC12.2/C-FB12.2/C-PF12.2

### **(C-AC12.2/C-FB12.2/C-PF12.2) Do you encourage your suppliers to undertake any agricultural or forest management practices with climate change mitigation and/or adaptation benefits?**

Yes

## C-AC12.2a/C-FB12.2a/C-PF12.2a

**(C-AC12.2a/C-FB12.2a/C-PF12.2a) Specify which agricultural or forest management practices with climate change mitigation and/or adaptation benefits you encourage your suppliers to undertake and describe your role in the implementation of each practice.**

---

### **Management practice reference number**

MP1

### **Management practice**

Other, please specify

Responsible Sourcing Principles

### **Description of management practice**

In 2017, we launched our Responsible Sourcing Principles (RSP) and Implementation Guidelines, which established the foundation for a more comprehensive and systematic approach to addressing supply chain sustainability beyond our agricultural supply chain. The RSP provides PMI's expectations in the areas of human rights, environment, and business integrity. The environment section covers environmental compliance and management, and resource consumption and waste minimization. In the area of climate change, our RSP encourages suppliers to review, identify and minimize their environmental impacts, especially regarding land use, waste, emissions, energy and water consumption. Our RSP also encourages supplier set targets for improvement, measure performance and report on them.

### **Your role in the implementation**

Operational

### **Explanation of how you encourage implementation**

The RSP applies to all suppliers doing business with PMI, including tobacco farmers, who must additionally follow our Good Agricultural Practices (GAP) program and Agricultural Labor Practices (ALP) Code. The RSP is available in 27 languages to accommodate local requirements. We rolled out the RSP to global partners that covered 99% of our total spend on global vendors by December 2017. A major focus in 2018 was on delivering training and workshops for PMI procurement teams as part of the capacity-building process with suppliers. In parallel, we are developing a Supplier Due Diligence Framework in line with international best practices. The Framework aims to



regularly evaluate suppliers' status in social, environmental, and business integrity compliance and to address gaps within our RSP or other commitments. We start with an initial risk-based screening of suppliers according to geography and industry in order to prioritize engagement with suppliers and level of monitoring. Monitoring may indeed range from self-assessments, to desktop reviews, and up to suppliers' on-site audits. Our objective is to support suppliers to continuously improve their practices as needed to meet our requirements, and improve the overall working and living conditions in our supply chain. An integral part of the Supplier Due Diligence Framework is a process designed to ensure that suppliers have established action plans for potential gaps and that they rigorously and timely implement them. Tracking and reporting on our suppliers' performance, both internally and externally, will drive transparency. In addition, we will continue to look for further opportunities to collaborate with our suppliers in specific projects to improve social and environmental sustainability. We are setting up an online supplier platform (based on information collection and data exchange) to deliver the Supplier Due Diligence Framework in practice. During 2019, we intend to invite the first wave of suppliers to join the platform as the core part of their assessment against our RSP. The target is to assess 100% of global suppliers of direct materials and devices using the platform. Suppliers of technical and indirect materials will be the next target group.

**Climate change related benefit**

- Emissions reductions (mitigation)
- Increasing resilience to climate change (adaptation)

**Comment**

---

**Management practice reference number**

MP2

**Management practice**

- Other, please specify
  - Good Agricultural Practices Program

**Description of management practice**



Tobacco growing, harvesting and curing account for around 40 percent of our carbon footprint. We are working with farming communities to reduce the environmental footprint of tobacco curing and growing. We do that through our Good Agricultural Practices (GAP) program and strategic initiatives such as curing barn improvements and reforestation. GAP lays out extensive agricultural environmental practices for farmers to adopt; these practices cover effective farming techniques, the safe storage, handling and use of chemicals (crop protection agents), water and waste management, energy and raw material efficiency. GAP also covers soil management/conservation, biodiversity and the sustainable use of wood. GAP implementation helps us deliver on our 2020 target for CO2 reduction in our value chain.

**Your role in the implementation**

Financial

Knowledge sharing

**Explanation of how you encourage implementation**

We mandate GAP implementation for suppliers of tobacco to PMI. Our Leaf Department supports our suppliers in implementing GAP and, where we directly contract farmers, our field technicians provide direct support.

**Climate change related benefit**

Emissions reductions (mitigation)

Increasing resilience to climate change (adaptation)

**Comment**

**C-AC12.2b/C-FB12.2b/C-PF12.2b**

**(C-AC12.2b/C-FB12.2b/C-PF12.2b) Do you collect information from your suppliers about the outcomes of any implemented agricultural/forest management practices you have encouraged?**

Yes

## C12.3

**(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?**

- Trade associations
- Other

### C12.3b

**(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?**

- Yes

### C12.3c

**(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.**

---

**Trade association**

U.S. Council for International Business (USCIB)

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

One of the main areas of focus of the USCIB is sustainable development. They state that the "economic growth and energy of the U.S. depends on international regulations that promote strong private-sector role in wise management and use of resources, effective environmental stewardship and greener growth and needs: (1) Sustainable Cost-effective, science and risk-based cooperative environmental and energy policies to address the challenges of climate change while protecting energy security, promoting innovation and efficiency and advancing resilience to climate impacts; and provide multilateral solutions to trans-boundary environment, energy and climate challenges, and reject unilateral, arbitrary measures that disqualify technology or energy options; and (2) Pro-growth, market oriented policies that promote sustainable



development to develop multilateral and national partnership frameworks to incentivize private sector involvement in sustainable development planning, implementation and risk allocation minimization; and maintain technology neutral policies and other enabling frameworks to encourage trade and investment in cleaner technologies and energy sources.

**How have you influenced, or are you attempting to influence their position?**

Our trade association memberships relate to specific business priorities which do not currently include climate change. We are not currently involved in, nor do we influence, trade association positions on climate change.

---

**Trade association**

National Center for Asia-Pacific Economic Cooperation

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

APEC have supported the development of an energy strategy study which includes: "Expand and Diversify Supply of Energy Resources; Promote Conservation and Improve Efficiency; Promote Open and Efficient Energy Markets; Clean Energy Use and Technology Innovation."

**How have you influenced, or are you attempting to influence their position?**

Our trade association memberships relate to specific business priorities which do not currently include climate change. We are not currently involved in, nor do we influence, trade association positions on climate change.

---

**Trade association**

US ASEAN Business Council

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**



Their Energy Committee covers broad energy improvement topics including energy efficiency and renewables.

**How have you influenced, or are you attempting to influence their position?**

Our trade association memberships relate to specific business priorities which do not currently include climate change. We are not currently involved in, nor do we influence, trade association positions on climate change.

---

**Trade association**

EconomieSuisse

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

Energy and Environment section: "Climate protection concerns us all and Swiss business is pointing the way. Based on voluntary measures it has successfully charted a path of CO2 reduction and continues to stay the course. Innovation in this sector is doubly advantageous: resource-friendly processes help cut costs and may evolve into business ideas. Regardless of any decision for or against certain technologies we promote a reliable, affordable, and environmentally friendly energy supply...."

**How have you influenced, or are you attempting to influence their position?**

Our trade association memberships relate to specific business priorities which do not currently include climate change. We are not currently involved in, nor do we influence, trade association positions on climate change.

**C12.3e**

**(C12.3e) Provide details of the other engagement activities that you undertake.**

We work with not-for-profit organizations and governments to support communities on environmental sustainability topics including sustainable forestry, reforestation, controlled use of pesticides in agriculture, sustainable rural living conditions and education; all of these can have an influence on climate

change improvement, adaptation and mitigation. In 2018, PMI supported projects to protect and enhance natural resources, implement conservation agriculture, provide clean water, cater for food security, and improve the livelihoods of people living in rural communities. Selected examples include:

- Our efforts to replace cigarettes with smoke-free products will require less tobacco and reduce the associated carbon emissions, however this may adversely impact the livelihood of our suppliers. We are thus proactively supporting crop diversification to prepare for this market shift. We follow a multi-stakeholder approach involving suppliers, NGOs, and other companies active in the agricultural sector. For example, PMI is partnering with the USAID Malawi-Feed the Future, Agriculture Diversification Activity to diversify smallholder farmers' production away from tobacco. Malawi was selected as one of the priority markets for our diversification efforts as tobacco accounts for more than half of the country's export. We work with our tobacco suppliers and their farmers to introduce alternative crops for food and for additional sources of income. Trials are conducted to identify high-yielding, disease-resistant, and drought-tolerant varieties of groundnuts and soy beans. Selected farmers for this trial receive crop inputs, insurance and storage sites, technical advice and support in the marketing of their production. Water is key to the success of these initiatives. We promote solutions collaborating with a company specialized in precision irrigation making available solar boreholes and storage tanks and testing different irrigation systems. In Mozambique, Business for Development supports us, and our local supplier, in identifying feasible alternative or complementary crops for smallholder farmers. We have trials on flaking maize, cotton and potatoes underway and on-going discussions with potential off-take partners. Another example of our work is since September 2017, when PMI announced its support for the establishment of the Foundation for a Smoke-Free World. The Foundation is an independent body, governed by its Board of Directors. It focuses on partnering with agricultural, rural development, smallholder experts and farmers to identify alternative livelihoods for tobacco farmers.
- Climate change will increase the frequency and severity of extreme weather events. Our disaster and emergency relief support helps communities around the world rebuild after a crisis. In 2018, PMI donated over \$1.9 million USD to support communities' disaster relief efforts such as support to enhance Greece's response capacity to increasingly devastating wildfires.
- PMI's Charitable Contributions program includes projects that can influence climate change improvement, adaptation and mitigation, for a total investment of \$ 28.3 million USD, and involves over 230 partner organizations, in 63 countries. In 2018, we focus on access to education, women empowerment, and economic opportunity. For example, in Mexico, PMI continued to support an initiative of the Natural Areas and Sustainable Development Civil Partnership to create new business opportunities for small agricultural producers, while increasing their resources management capacity and knowledge of eco-technology solutions. A key component of the project was the implementation of sustainable backyard plots in homes and schools to increase water availability, diversify energy sources, and reduce waste and pollution. A detailed list of the projects we supported is available on PMI's website ([https://www.pmi.com/resources/docs/default-source/our\\_company/charitable-2018.pdf?sfvrsn=d97d91b5\\_2](https://www.pmi.com/resources/docs/default-source/our_company/charitable-2018.pdf?sfvrsn=d97d91b5_2)).
- In 2018, we continued supporting multi-stakeholder initiatives on environmental topics by, for example, signing up the Brazilian Business Commitment to Water Security, a coalition of companies led by the Brazilian branch of the World Business Council for Sustainable Development. Our commitment includes the implementation of the Alliance for Water Stewardship (AWS) Standard and a partnership with tobacco growers to restore degraded river banks (Water Guardian Project).
- PMI is reporting transparently on its far-reaching climate protection programs in its annual Sustainability Report, and also via its website and social media channels.



- Besides CDP, PMI participates in climate-related initiatives such as the Science Based Targets initiative, SASB (Sustainability Accounting Standards Board), WBCSD, Sustainable Brands, We Mean Business, and the TCFD (Task Force on Climate-related Financial Disclosures). We believe that we need to join efforts across industries to help improve climate action.

## C12.3f

### **(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?**

PMI operates within an overarching Code of Conduct to a set of internal policies, which we call our Guidebook for Success. These policies cover our mandatory requirements and processes in relation to environment, health and safety (EHS) and sustainability, which includes our climate change strategy; corporate contributions; and interaction with government officials, among others. As part of these management controls, we conduct due-diligence to ensure consistency with our Code and Principles, and to check potential compliance and reputation issues when joining trade associations. We belong to many carefully selected business and trade associations around the world. We work with these groups because they represent our industry and the larger business community in policy discussions on issues where we have a common interest or objective. Our support to these organizations and groups complies with applicable laws and our own principles and practices. We routinely evaluate our participation to ensure that the groups' objectives align with the long-term interests of PMI and its shareholders, and that their activities continue to reflect PMI's values and high standards of conduct. There are times when we may not agree with certain positions adopted by the organizations we support. In these instances, we may choose to withdraw our participation or support. Other external facing activities related to climate change are also reviewed by our External Affairs and Sustainability Team to ensure consistency with our climate change strategy.

## C12.4

### **(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

---

#### **Publication**

In voluntary sustainability report

#### **Status**

Complete

**Attach the document**

 PMI 2018 Sustainability Report.pdf

**Page/Section reference**

Pillar 4 - Reducing our environmental footprint: pages 88-109

Our performance (continued): pages 124-127

**Content elements**

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

**Comment**

## C13. Other land management impacts

### C-AC13.2/C-FB13.2/C-PF13.2

(C-AC13.2/C-FB13.2/C-PF13.2) Do you know if any of the management practices mentioned in C-AC12.2a/C-FB12.2a/C-PF12.2a that were implemented by your suppliers have other impacts besides climate change mitigation/adaptation?

Yes

## C-AC13.2a/C-FB13.2a/C-PF13.2a

**(C-AC13.2a/C-FB13.2a/C-PF13.2a) Provide details of those management practices implemented by your suppliers that have other impacts besides climate change mitigation/adaptation.**

---

**Management practice reference number**

MP1

**Overall effect**

Positive

**Which of the following has been impacted?**

Other, please specify

Environmental Management

**Description of impacts**

In addition to greenhouse gas emissions, environmental impacts of our suppliers can include impacts to:

- Air, such as through sulfur dioxide emissions from burning fuel oil in boilers which can lead to acid rain;
- Water, such as wastewater discharge from plating operations, which can lead to poisoning of fish and metal contamination of plants;
- Soil, such as through leakages from storage tanks which could lead to soil contamination.

**Have any response to these impacts been implemented?**

Yes

**Description of the response(s)**

The environment section of our Responsible Sourcing Principles (RSP) and Implementation Guidelines covers environmental compliance and management, and resource consumption and waste minimization. Our RSP encourages suppliers to review, identify and minimize their environmental impacts.



**Management practice reference number**

MP2

**Overall effect**

Positive

**Which of the following has been impacted?**

Biodiversity

Soil

Other, please specify

Human Health & Labor Practices

**Description of impacts**

The environmental impact of tobacco farming can be significant, and the GAP program is therefore crucial for managing and reducing our overall environmental footprint.

In addition to greenhouse gas emissions, traditional tobacco farming uses hazardous Crop Protection Agents (CPA) that has adverse impacts on biodiversity, soil, water and human health.

**Have any response to these impacts been implemented?**

Yes

**Description of the response(s)**

Due to the nature of PMI's business, there are no significant impacts on biodiversity or deforestation from our own operations. Where we do have a larger role to play on biodiversity is in our supply chain. Impacts linked to tobacco farming are addressed through our Good Agricultural Practices program for tobacco suppliers, where we describe our requirements for good environmental practices, including integrated pest management and soil conservation practices, as well as biodiversity management.

GAP provides guidance on biodiversity management practices and requires our tobacco suppliers to develop and implement a biodiversity management plan that incorporates, and goes beyond compliance with the applicable laws, and regulations for tobacco- and forest-growing



areas. Tobacco production areas must not be located in places that could cause negative effects on national parks, wildlife refuges, biological corridors, forestry reserves, buffer zones, or other public or private biological conservation areas.

## C14. Signoff

### C-FI

**(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.**

### C14.1

**(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.**

	Job title	Corresponding job category
Row 1	Andre Calantzopoulos, Chief Executive Officer (CEO)	Chief Executive Officer (CEO)

## SC. Supply chain module

### SC0.0

**(SC0.0) If you would like to do so, please provide a separate introduction to this module.**

### SC0.1

**(SC0.1) What is your company's annual revenue for the stated reporting period?**

	Annual Revenue
Row 1	29,625,000,000

## SC0.2

**(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?**

Yes

## SC0.2a

**(SC0.2a) Please use the table below to share your ISIN.**

	ISIN country code (2 letters)	ISIN numeric identifier and single check digit (10 numbers overall)
Row 1	US	7181721090

## SC1.1

**(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.**

---

### Requesting member

S Group

### Scope of emissions

Scope 1

### Allocation level

Company wide



**Emissions in metric tonnes of CO<sub>2</sub>e**

444

**Uncertainty (±%)**

5

**Major sources of emissions**

Emissions from scope 1 include fuel used in factories, fleet and offices.

**Verified**

No

**Allocation method**

Allocation based on the number of units purchased

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

Emissions calculated by extrapolation from PMI wide scope 1 emissions 408,162 tCO<sub>2</sub>e and total annual volume sold 815,458 million equivalent cigarettes sold and 887 million equivalent cigarette units purchased by the customer in 2018.

---

**Requesting member**

S Group

**Scope of emissions**

Scope 2

**Allocation level**

Company wide

**Emissions in metric tonnes of CO<sub>2</sub>e**

191



**Uncertainty ( $\pm\%$ )**

5

**Major sources of emissions**

Electricity and district heating used in our factories and offices.

**Verified**

No

**Allocation method**

Allocation based on the number of units purchased

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

Emissions calculated by extrapolation from PMI wide scope 2 emissions 175,785 tCO<sub>2</sub>e and total annual volume sold 815,458 million equivalent cigarettes sold and 887 million equivalent cigarette units purchased by the customer in 2018.

---

**Requesting member**

S Group

**Scope of emissions**

Scope 3

**Allocation level**

Company wide

**Emissions in metric tonnes of CO<sub>2</sub>e**

5,351

**Uncertainty ( $\pm\%$ )**

5



**Major sources of emissions**

Our scope 3 emissions are mainly due to sourcing raw materials like tobacco, paper and cardboard, due to services like marketing or consulting, due to upstream and downstream logistics and other minor impacts like business travel, use phase and end of life of our products.

**Verified**

No

**Allocation method**

Allocation based on the number of units purchased

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

Emissions calculated by extrapolation from PMI wide scope 3 emissions 4,919,763 tCO2e and total annual volume sold 815,458 million equivalent cigarettes sold and 887 million equivalent cigarette units purchased by the customer in 2018.

**SC1.2**

**(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).**

The best source of all our environmental information is our CDP climate response or in PMI 2018's sustainability report [https://www.pmi.com/resources/docs/default-source/pmi-sustainability/pmi-sustainability-report-2018-low-res.pdf?sfvrsn=cada91b5\\_2](https://www.pmi.com/resources/docs/default-source/pmi-sustainability/pmi-sustainability-report-2018-low-res.pdf?sfvrsn=cada91b5_2)

**SC1.3**

**(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?**

Allocation challenges	Please explain what would help you overcome these challenges
Diversity of product lines makes accurately accounting for each product/product line cost ineffective	We would need detailed bill of materials and emissions per SKU and volumes purchased by each customer
We face no challenges	



## SC1.4

**(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?**

Yes

### SC1.4a

**(SC1.4a) Describe how you plan to develop your capabilities.**

We have internal capabilities to allocate emissions to customers. If more customers request more information we will develop dedicated tools to answer to them.

## SC2.1

**(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.**

---

**Requesting member**

S Group

**Group type of project**

Other, please specify

We seek to partner with our customers and study potential collaborative opportunities. We invite our customers to provide ideas on logistics, packaging designs or operational opportunities that would improve both of our environmental footprints.

**Type of project**

Other, please specify

Partnering to achieve environmental footprint reduction

**Emissions targeted**



Other, please specify

Partnering to achieve environmental footprint reduction

**Estimated timeframe for carbon reductions to be realized**

Other, please specify

Ongoing

**Estimated lifetime CO2e savings**

**Estimated payback**

Cost/saving neutral

**Details of proposal**

We seek to partner with our customers and study potential collaborative opportunities. We invite our customers to provide ideas on logistics, packaging designs or operational opportunities that would improve both of our environmental footprints: carbon emissions, water scarcity, waste and littering and deforestation.

**SC2.2**

**(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?**

No

**SC3.1**

**(SC3.1) Do you want to enroll in the 2019-2020 CDP Action Exchange initiative?**

No



### SC3.2

**(SC3.2) Is your company a participating supplier in CDP’s 2018-2019 Action Exchange initiative?**

No

### SC4.1

**(SC4.1) Are you providing product level data for your organization’s goods or services?**

No, I am not providing data

## Submit your response

**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

	Public or Non-Public Submission	I am submitting to	Are you ready to submit the additional Supply Chain Questions?
I am submitting my response	Public	Investors Customers	Yes, submit Supply Chain Questions now

**Please confirm below**

I have read and accept the applicable Terms

